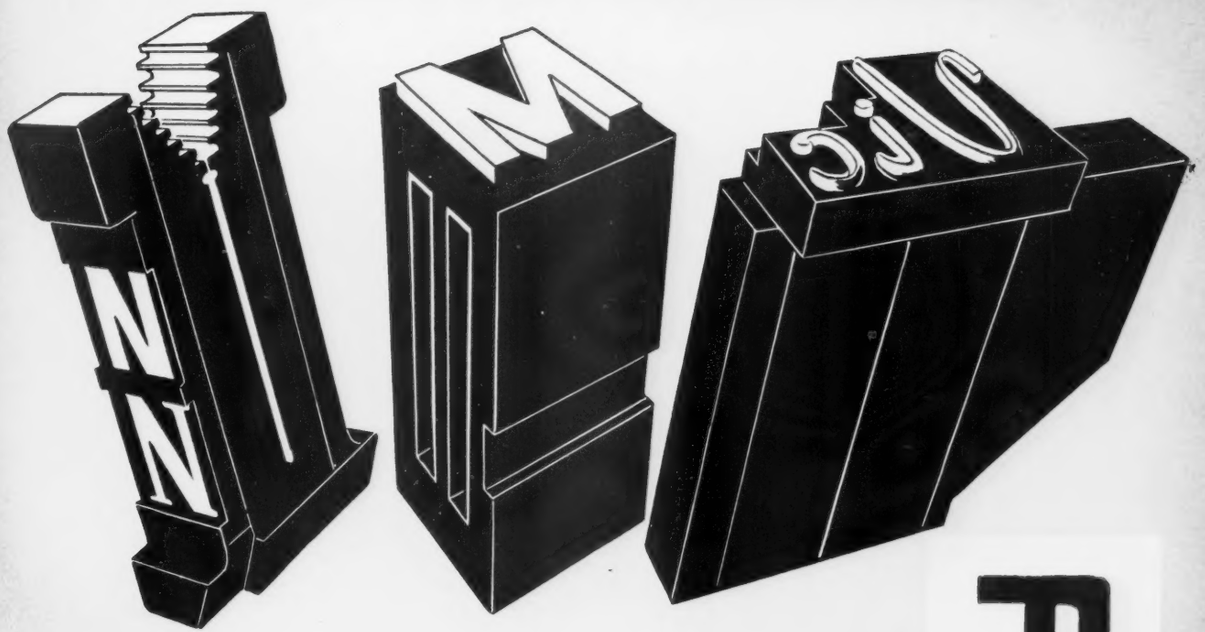
PRINTING EQUIPMENT ENGINEER



FEBRUARY 1939

A TECHNICAL PUBLICATION FOR PRODUCTION AND MECHANICAL EXECUTIVES IN THE GRAPHIC ARTS INDUSTRY

The ***Mixer*** **Linotype** assembles matrices from any two adjacent magazines ***in the same line,*** and the matrices will be *automatically distributed.* Roman, *italic,* SMALL CAPS, **bold face** and ***bold italic.***

10 point Baskerville and 9 point Garamond Bold No. 3

The *Mixer* Linotype assembles matrices from any two adjacent magazines ***in the same line,*** and the matrices will be *automatically distributed.* Roman, *italic,* SMALL CAPS, **bold face and *bold italic.***

10 point Bodoni and Poster Bodoni

The *Mixer* Linotype assembles matrices from any two adjacent magazines ***in the same line,*** and the matrices will be *automatically distributed.* Roman, *italic,* SMALL CAPS, **bold face and *bold italic.***

10 point Bookman and Metroblack No. 2 with Italic

The *Mixer* Linotype assembles matrices from any two adjacent magazines ***in the same line,*** and the matrices will be *automatically distributed.* Roman, *italic,* SMALL CAPS, **bold face and *bold italic.***

10 point Caslon Old Face and Cloister Bold

The *Mixer* Linotype assembles matrices from any two adjacent magazines ***in the same line,*** and the matrices will be *automatically distributed.* Roman, *italic,* **bold face and *bold italic.***

10 point Memphis Light and Memphis Bold

The *Mixer* Linotype assembles matrices from any two adjacent magazines ***in the same line,*** and the matrices will be *automatically distributed.* Roman, *italic,* **bold face and *bold italic.***

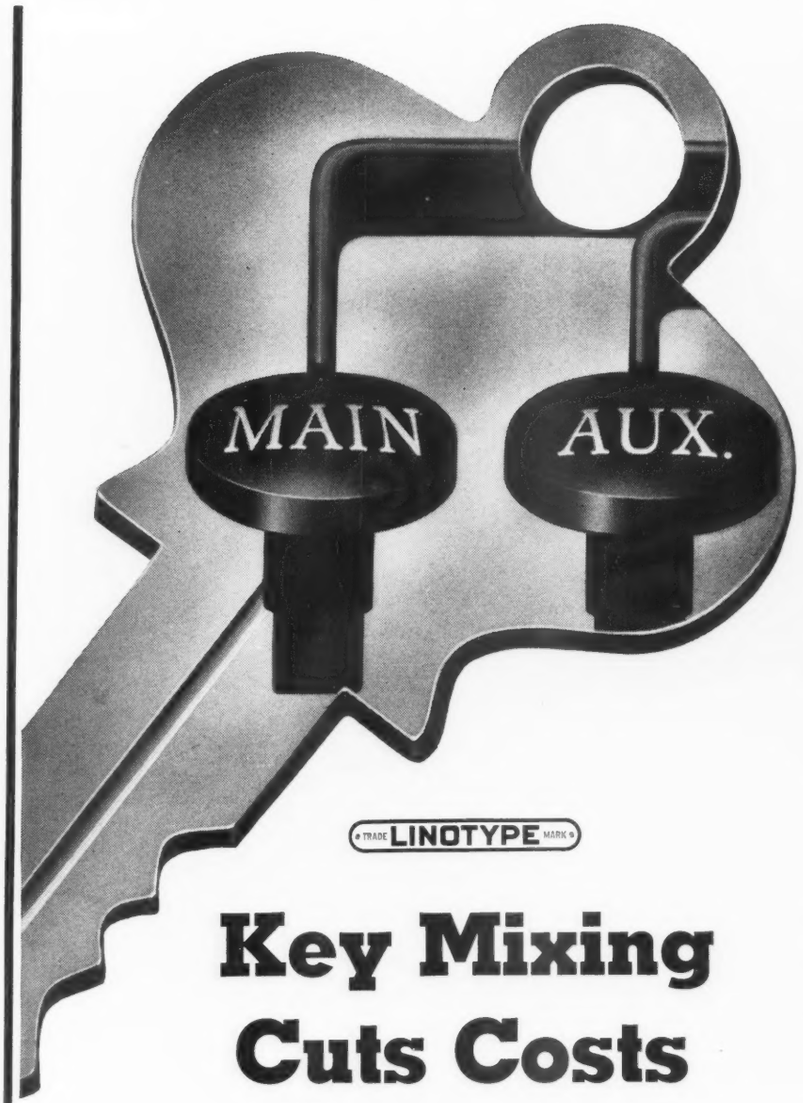
10 point Metroblack No. 2 with Italic and Metrolite No. 2 with Italic

The *Mixer* Linotype assembles matrices from any two adjacent magazines ***in the same line,*** and the matrices will be *automatically distributed.* Roman, *italic,* SMALL CAPS, **bold face and *bold italic.***

10 point Scotch and Bodoni Bold

The *Mixer* Linotype assembles matrices from any two adjacent magazines ***in the same line,*** and the matrices will be *automatically distributed.* Roman, *italic,* SMALL CAPS, **bold face and *bold italic.***

10 point Textype and Memphis Bold



TRADE LINOTYPE MARK

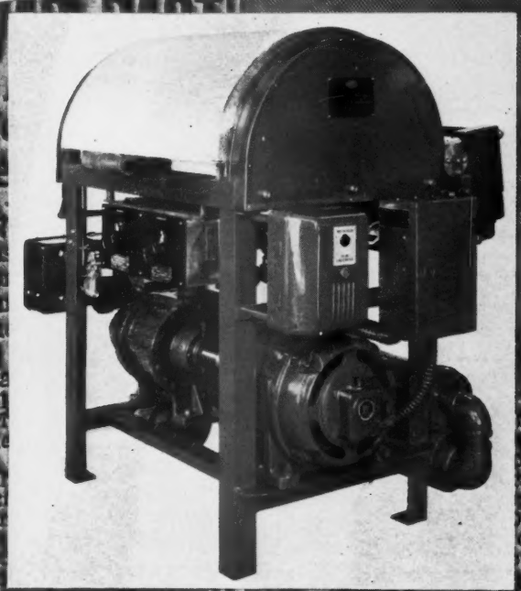
Key Mixing Cuts Costs

Mixing causes no break in operating tempo if you mix the modern way . . . by key. Set mixed matter at the speed of straight matter! Change from one face to another with only a split-second pause! Key mixing is a feature of both Linotype Blue Streak Mixers, models 29 and 30. If you've saved time with the old lever mixers, you can save still more time with these new key mixers. If you've never enjoyed the advantages of continuous distribution, see it at its best in these Blue Streak models. Mix from adjoining magazines by touching a key with action as light as a letter key . . . as fast as the drop of a mat. One key for main magazines . . . one key for auxiliaries, both conveniently located. It's another *important* advantage, exclusive on the Linotype.

Mergenthaler Linotype Company

Memphis Extra Bold, Medium and indicated faces

"Saves 8 to 10% on dry-mat wastage-no rerolls on dry mats because of buckles"



The Autoformer brings you economy so great that it usually pays for itself before you know it. It cuts out all items of dry-mat wastage by controlled electric baking—eliminates rerolls because of defective mat casting levels. The Autoformer has only one product—Uniform Casting Levels.

The Autoformer is ROUTINE DESIGNED to fit into the routine of dry-mat processing, ready for casting units, in the shortest direct production line, plus accuracy of product.

The Autoformer can now be fitted with The NEW AUTOMATIC VACUUM SHRINKING ATTACHMENT, a new major cycle, again saving time and controlling maximum shrinkage.

The NEW AUTOFORMER now has 3 major automatic cycles of operation . . .

1. Controlled Maximum Vacuum Shrinkage with The New Automatic Vacuum Shrinkage Attachment.
2. Complete Vacuum Forming to Uniform Casting Levels.
3. Final Electric Baking, ready for Casting Units, producing Uniform Printing Levels.

STA-HI CORPORATION

1020 Crocker St.
Los Angeles, Calif.

417 Oregonian Bldg.
Portland, Oregon

The Human Eye in the Graphic Arts

(Have you had your vitamin A today?)

By ADAM HENRI REISER

II.

IN THE first article we called attention to the importance of visibility, especially as applied to the Graphic Arts. Paint and its reflective surfaces, light sources, and lighting fixtures scientifically treated by illuminating engineers were outlined. Then came mention of the four paths taken by research in the field of sight:

A. The effect of light on the eye.
B. The replacement in the eye of the substance expended by sight.
C. The effect of sound on sight.
D. Speed reading and the conservation of sight.

In developing the first item, the effect of light on the eye was shown to bleach out the material "Visual Purple" of the retina. What can be done to replace the expended material?

Replacement of "Visual Purple"

It has always been recognized that strong light bothered the eyes. But it was not until the scientific explanation offered by the recent study of Drs. Wise and Schettler that the substance known as "Visual Purple" was found to be expended when the eye sees. This substance is produced in the eye mechanism from Vitamin A, and while the body will manufacture Visual Purple, it cannot store it up for future use. Therefore, it becomes essential that a sufficient daily intake of Vitamin A be assured so that the human system can replenish the supply of the necessary Visual Purple.

Prior to the above reports, it was known that proper food, or in reverse, a deficiency of certain elements in the food intake, had a definite effect on the eyes. It was really uncovered in the late World War when night blindness was encountered in numerous instances. At first raw liver was found to have a beneficial effect on the victims. Cod liver oil also helped. Rest behind the lines and dieting aided recovery. The war experience also served to stress the fact that a balanced diet was necessary to stave off a disintegration of bodily functions. But let's get back to our industry.

In the work of Drs. Wise and Schettler, the color-matching efficiency of workmen's eyes was raised as much as 75% per worker through the daily intake of carotene-in-oil. Marked relief from daily eyestrain among those workers by the use of carotene-in-oil was also noticed. This carotene has the property of speeding up the replacement of Visual Purple in the eyes of the worker. Remember that Visual Purple is the light-sensitive substance in the retina of the eye, that enables mankind to see.

Carotene-in-oil, it seems, is only one of the substances which produce Vitamin A, the necessary ingredient in the manufacture of Visual Purple. Incidentally, Vitamin A will build up body resistance to colds, prevent infections of the eyes, ears, nose and throat, sinuses, and lungs, and supply the Visual Purple to the eye. Vitamin A, therefore, is most important in any diet.

Of the vegetables, escarole has the highest vitamin content, while in flesh and fowl, calves' liver, and shad roe rank highest, with egg yolk, animal fats, halibut liver oil being rich sources also. Dairy butter, new carrots, spinach, string beans, raw cabbage, green peas, lettuce, pumpkin, sweet potatoes, green peppers, green kale, apricots, fruits, tomatoes, all supply Vitamin A.

To maintain effective eyesight, Dr. Hargraves, of the U. S. Army Air Corps recommends that all pilots over the age of 35 take the equivalent of 4000 international units of Vitamin A in their daily foods. To quote Dr. Hargraves: "This amount of Vitamin A (4000 international units) can be obtained from the daily consumption of two cooked leafy vegetables, such as spinach, sprouts or cabbage; one uncooked leafy vegetable such as lettuce, and the drinking of one quart of milk, provided the cows have been fed on green fodder." "Ersatz" in the form of excelsior fed to cows under a green light would fail to answer this last qualification.

It cannot be overemphasized that the replenishment of this Vitamin A must be made a daily affair. It cannot be made cumulative, for the system does not store it readily.

The contribution by Drs. Wise and Schettler supplements the fact that muscular contraction alone was thought responsible for abnormalities in eyesight. It was formerly contended that continued close work so affected the eye that the muscular constriction compressed the eyeball and changed the shape to conform with the common demand on that eye. The recent finding, however, indicates that there is in addition a destruction of a substance when the eye is subjected to light.

The Effect of Sound on Sight

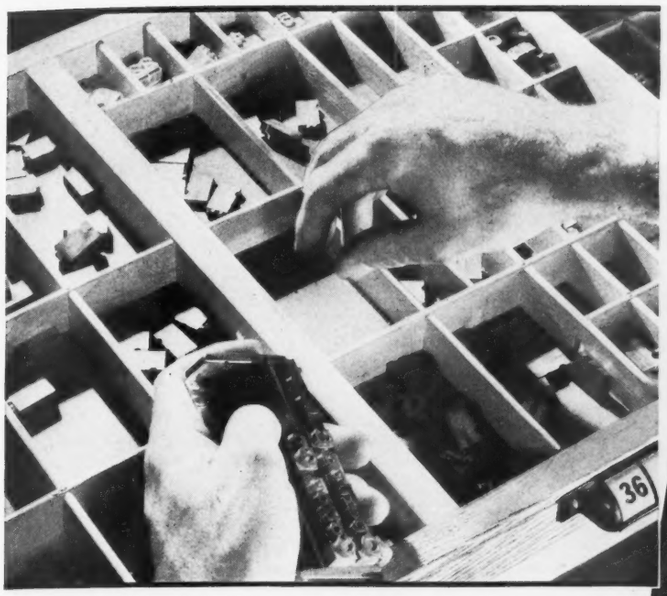
In addition to light having this destructive effect on sight (destructive in the sense that a substance is destroyed) sound also has been found to have an effect on the way people see objects. P. A. Yakolev describes this in an article in *The Journal of the Optical Society of America*. He notes that certain colors are seen better under conditions of quiet while others may be seen better with one or two degrees of noise. The blues and greens of a colored picture, for instance, when seen with sound will be intensified, whereas the orange-red of the same picture will be diminished in strength. Show the same picture under conditions of absolute quiet, and the reverse holds—the orange-red now will be seen strong, and the blue-greens diminished. Red stays the same under any condition; varying degrees of sound having no effect on the perception of red light.

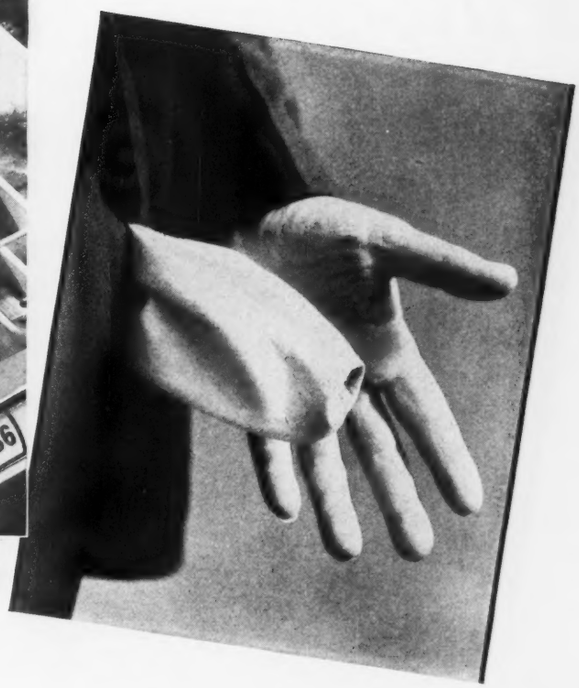
So far as appears to be known at this time, no attempt has been made to ascertain whether this finding offers any basis for the variation of opinions on color which so often take place between the observer in a quiet office and the man in a noisy pressroom. It seems likely that the current saying of "You got something there, brother," may hold in this case.

Sight Conservation

The fourth and last trend of the work in the field takes the shape of conservation of time and energy. Microphotography offers the means to accomplish this through the transfer of books and novels to tiny rolls of film. This is done at the rate of 900 pages per hour by means of a new machine which may rest on an ordinary desk. These rolls may then be enlarged at demand to a size easily read. Director M. Llewellyn Raney, of the University of Chicago Library believes this idea "is the

(*Continued on Page 37*)





"Out of Sorts" means "Out of Pocket"

Only with Ludlow can you gain ALL these advantages

- Type supply that never runs out
- Up-to-the-minute typeface designs
- Wide selection of faces—full size range
- No worn or broken letters
- Used effectively by any competent compositor
- Instant change of size and face
- Faster setting—matrix "gathering"
- Easy alignment of different sizes
- Rapid and easy spacing
- Economies of all-slug make-up
- Recasting slugs for repeated copy
- Self-quadding and self-centering
- Long lines with single justification
- Unbreakable italics and scripts
- Slugs withstand severe molding pressure
- Accuracy in height to paper
- Forms once corrected stay correct
- Simplicity of mechanism and operation
- No cost for typemaking
- Economy of floor space
- Low-cost display composition

Set in Ludlow Tempo family

You can't get production when the type supply runs short. And when you're out of sorts, you're out of luck, and lost time is lost money.

Ads nearly complete, forms almost ready to close, then empty letter boxes. You know this story well!

In the Ludlow-equipped newspaper composing room, there is no such thing as "running out of sorts," with new sluglines cast as needed from hand-set matrices. Rush copy or "run-of-the-hook"—it makes no difference. Every needed character in every face and size is always ready to the compositor's hand.

With Ludlow speed-set matrices, any amount of display composition in any specified face or size can be produced direct from hot metal, without prior expense for typemaking or subsequent cost, in time and trouble, of distribution.

And because many unnecessary operations are dispensed with in Ludlow operation, a large volume of display composition can be produced with surprising rapidity.

Cost of production and speed in getting pages to press are factors just as vital in importance to the active-minded mechanical executive as to the business office.

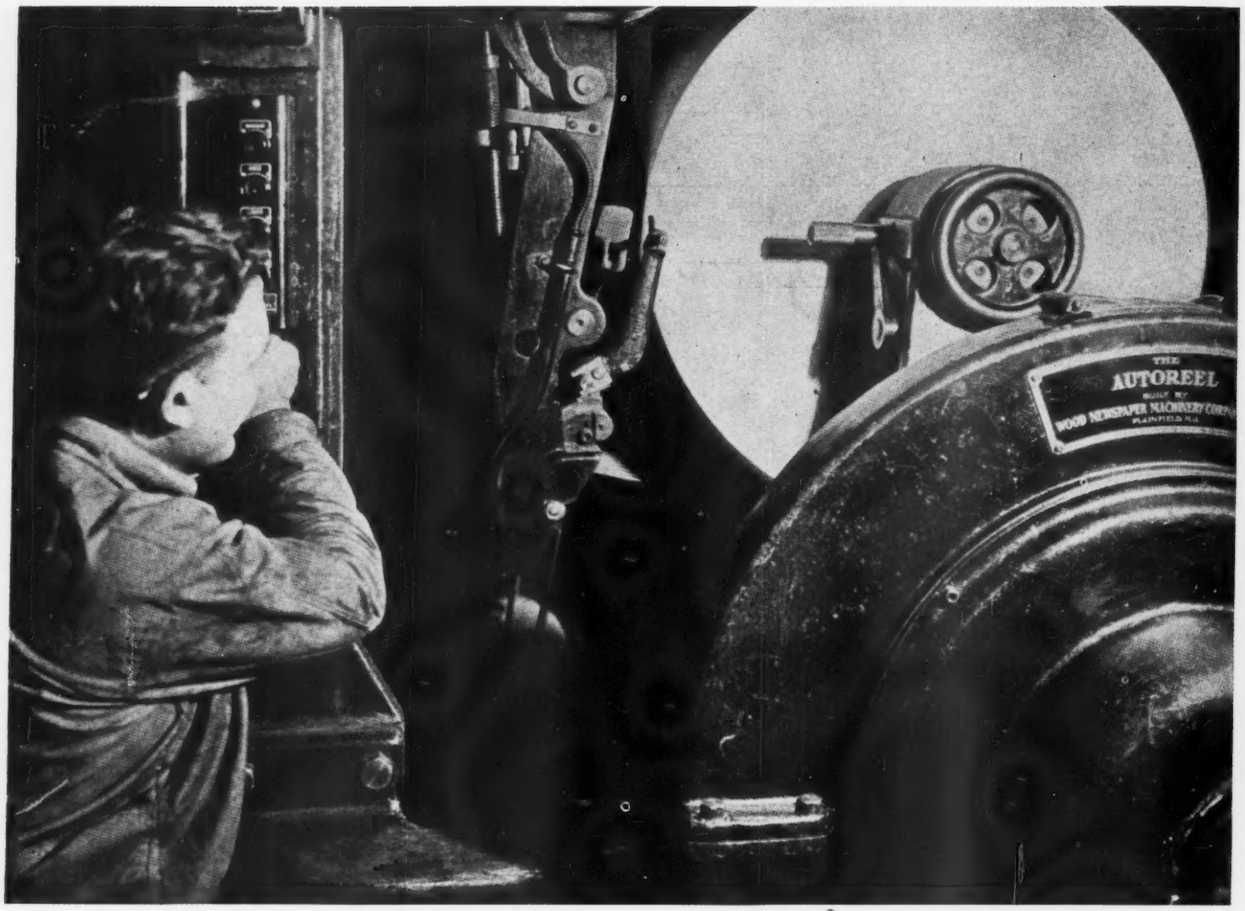
Write us today for information regarding the economy and improved facilities for display composition which the Ludlow will bring to your composing room.

LUDLOW TYPOGRAPH COMPANY

2032 Clybourn Avenue + + + Chicago, Illinois

Full-Speed Splices

98.61 times out of 100



Not least among the advantages of the Wood FULL-SPEED AUTOPASTER is its dependable operation.

In a daily record maintained for 20 months—covering 46 Autopasters—138,-848 rolls of newsprint were spliced automatically, *at full speed*, with an operating efficiency of 98.61%.

Autopasters greatly increase the production of newspaper presses, shorten their running time, and reduce newsprint waste by 50%.

They improve the quality of newspaper printing and folding—by maintaining a uniform printing and folding speed—and at the same time they make it possible to start presses later and finish earlier.

WRITE FOR PRINTED MATTER

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • NEW YORK OFFICE: 501 FIFTH AVENUE

CCA
Member of Controlled Circulation Audit

PRINTING Equipment ENGINEER

Contents for February, 1939:

HUMAN EYE IN GRAPHIC ARTS - - - - - - - - - 4
ADAM HENRI REISER

OPINIONS—LETTERPRESS, OFFSET, GRAVURE - - - - 13
MESSRS. RHODES, SCHULTZ, DERNLEY

EDITORIAL - - - - - - - - - - - - - - - - - 15

CONFERENCE AT ROCHESTER MECHANICS INSTITUTE - - 16

PLANNING THE PRINTING PLANT—II - - - - - - - 20
JAMES WILLIAM THOMAS

EQUIPMENT-SUPPLIES - - - - - - - - - - - - - 22

PAPER PROBLEMS - - - - - - - - - - - - - - - 26
LETTER P. OFFGRAV

IOWA MECHANICAL CONFERENCE - - - - - - - - - 26

REGISTER DEVICES FOR NEWSPAPER - - - - - - - 28
VERN WILLIAMS

WEATHER DOESN'T BOTHER TAMPA (FLA.) *Tribune* - 30
CLIFFORD ALVES

KEYBOARD CAM REPAIR BLOCK - - - - - - - - - 32

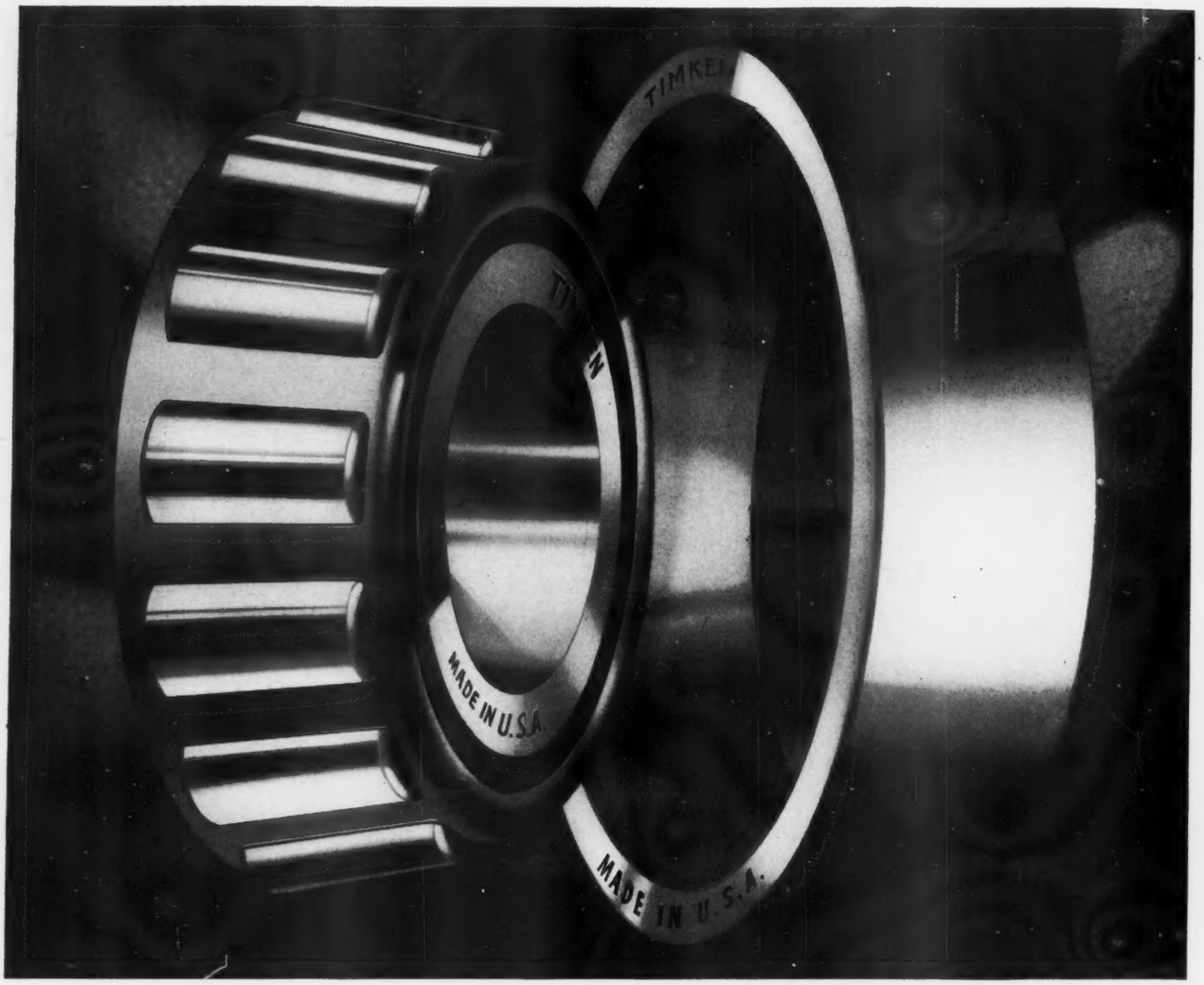
LITERATURE—EQUIPMENT INFORMATION - - - - - - 34

PATENTS - - - - - - - - - - - - - - - - - - 40

ADVERTISERS' INDEX - - - - - - - - - - - - - 54

Printing EQUIPMENT *Engineer*, a monthly publication. Vol. 57, No. 5. Published at 1276 West Third St., Cleveland, Ohio. Don Will, Publisher. Mac Sinclair, Editor. Adam Henri Reiser, Associate Editor. Eastern Manager: Russ Birchfield, 509 Fifth Ave., New York, N. Y.; phone VAnderbilt 3-5191. Western Manager: E. P. Bloomster, 232 East Erie St., Chicago; phone SUperior 2444. Copyright 1939 by Willsea Pub. Co. Single copy, 25c; subscription price per year $2 in advance. Printed in U. S. A.

A Technical Publication for the Mechanical Executive Responsible for Printing Production, Equipment and Supplies in the Commercial, Magazine, Private Plant and Daily Newspaper Field.



TIMKEN BEARINGS FOR FASTER— MORE ACCURATE PRINTING PRESSES

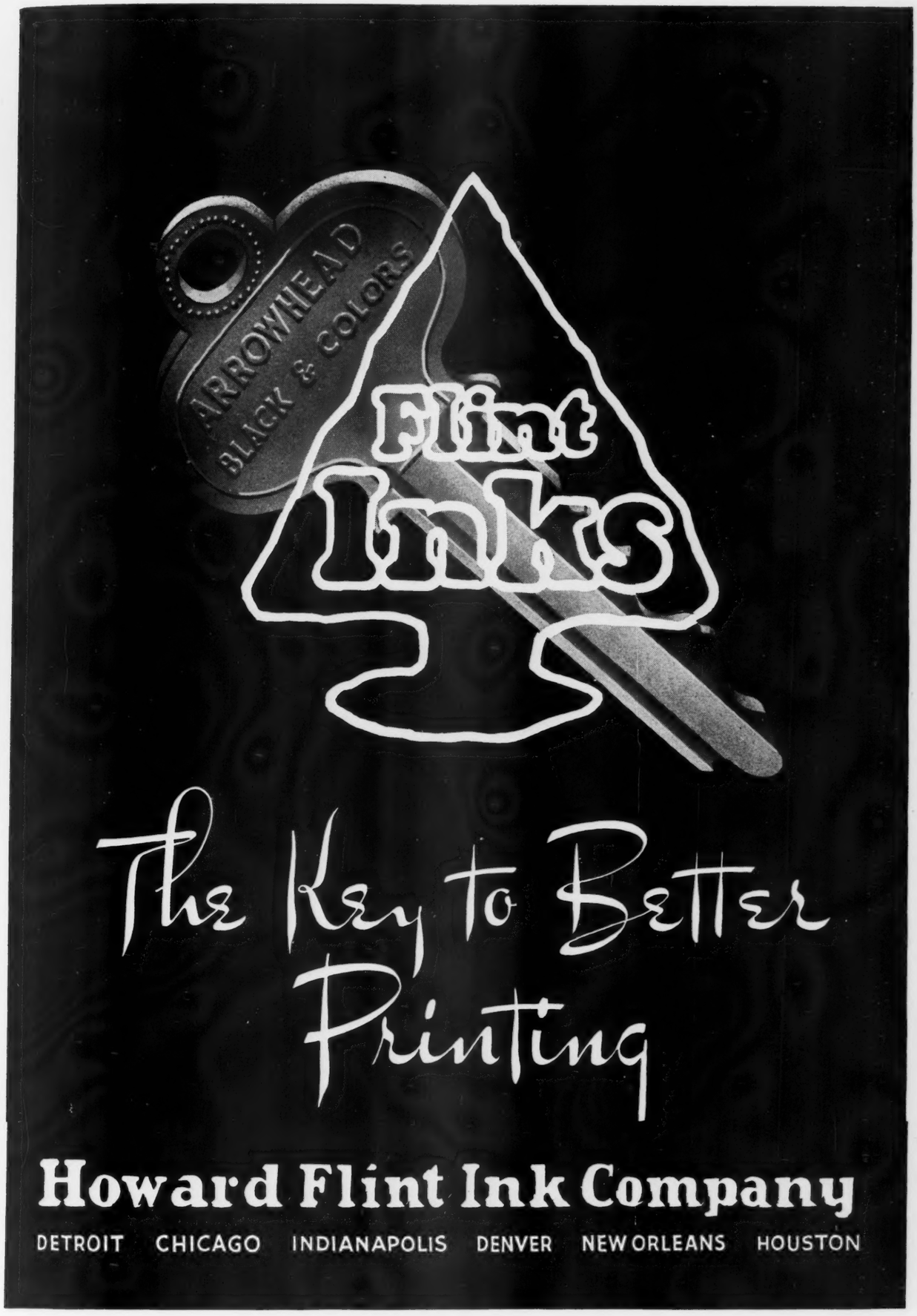
TRADE-MARK REG. U. S. PAT. OFF.

Your printing presses must keep in line with modern trends. That means they must operate at higher speeds and at the same time produce high quality work.

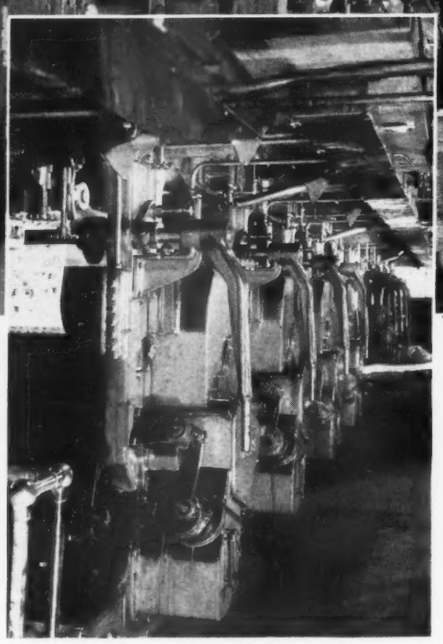
TIMKEN Bearings have done as much for printing presses as they have for precision machine tools where frequently tolerances as close as .0001" must be maintained. Modern newspaper presses now in operation demonstrate the advantages of TIMKEN Bearings on plate and impression cylinders and other moving parts. In one modern press friction has been reduced to such a degree that the cylinders continue to roll for 10 minutes after the power has been turned off! On this same press 60,000 complete newspapers are turned out every hour and every one of them a practically perfect example of newspaper printing. We invite you to consult with our engineers.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN
TAPERED ROLLER BEARINGS


ARROWHEAD
BLACK & COLORS
Flint
Inks
The Key to Better
Printing
Howard Flint Ink Company
DETROIT CHICAGO INDIANAPOLIS DENVER NEW ORLEANS HOUSTON

4 Color COMICS . . . at 38,000 per hour!



Printed on a GOSS MULTI-COLOR PRESS . . . at the Chicago Tribune

The Sunday comic section — once just an entertainment feature — now is becoming a profitable source of revenue. Color comic advertising outranks all other forms of newspaper advertising in linage gains during recent years. . . To meet these greater production demands — to produce more pages in less time — to maintain quality printing standards...The Chicago Tribune installed a new 16-cylinder Goss Multi-Color Press which is running off more than a million four-color comic sections each week at 38,000 per hour from one delivery. . . This new Goss Press, equipped with anti-friction bearings throughout and specially designed for fast, efficient operation, is adding its bit to the fine reputation of The Tribune for famous color printing. It is one of the many Goss Multi-Color Presses that have established enviable records for high speed, high quality production. . . Investigate the reasons why. Ask for full mechanical and economic facts. Write for details now!

★

THE GOSS PRINTING PRESS COMPANY
1535 SO. PAULINA ST., CHICAGO

GOSS

NEW YORK: 220 EAST FORTY-SECOND STREET • SAN FRANCISCO: 707 CALL BUILDING • GOSS FOSTER, LTD., LONDON, ENG.

BULL'S EYE!!

No matter what you do . . . whether working or playing . . . you're trying to hit some sort of target. "Hitting the bull's eye" is the aim in ANY field of endeavor.

BUT . . . amateurs don't hit bulls' eyes very often. Instead, it's the MARKSMAN . . . the man with experience and skill . . . who gets the best score . . . BECAUSE he's the man who KNOWS HOW!

For over 80 years, BINGHAM has been "hitting the bull's eye" of the printers' roller industry, by combining SKILL and EXPERIENCE and PROGRESSIVENESS to meet the demands of printers. The "marksman" of roller makers, BINGHAM KNOWS HOW!

Whether you require rollers of COMPOSITION, RUBBER or VULCANIZED OIL, when your presses are BINGHAM-EQUIPPED they're VALUE-EQUIPPED.

AND the locations of the sixteen BINGHAM factories mean economy and convenience to our customers.

SAM'L BINGHAM'S SON MFG. CO.

"Manufacturers of Printers' and Litho-Offset Rollers"

CHICAGO

ATLANTA	DES MOINES	INDIANAPOLIS	MINNEAPOLIS	PITTSBURGH
CLEVELAND	DETROIT	KALAMAZOO	NASHVILLE	SPRINGFIELD, O.
DALLAS	HOUSTON	KANSAS CITY	OKLAHOMA CITY	ST. LOUIS

Announcing

THE FIFTH EDUCATIONAL

GRAPHIC ARTS EXPOSITION

GRAND CENTRAL PALACE
Lexington Avenue, 46th to 47th Streets
NEW YORK

SEPTEMBER 25th to
OCTOBER 7th, both inclusive
1939

Plan Now to Exhibit at the greatest educational showing of Graphic Arts Equipment and Supplies ever displayed under one roof.

Information regarding Space, Regulations, Floor Diagrams and Rates may be obtained from

The NATIONAL GRAPHIC ARTS EXPOSITIONS, Inc.
480 LEXINGTON AVENUE, NEW YORK, N. Y.

Opinions

About letterpress, offset and gravure are varied but each of three speakers agrees that each has its place in the printing industry

Magazine Production Manager Discusses

By KENT RHODES*

NO matter how partial this group may be to lithography, I think you will admit that each process has its own peculiar merits and that no one process is superior to all the others for all kinds of work. However, from a standpoint of cost and convenience in operation, it is preferable to use only one printing process in a single issue of a publication. In the past, publishers have chosen the process which is best suited to the majority of their needs and then tried to fit their copy to that particular process.

In letterpress printing on newsprint, it was found that contrasty pictures reproduced most satisfactorily and newspaper publishers did everything in their power to see to it that they were supplied with such prints.

Similarly, studio photographers working for class magazines learned to pose and light their subjects with the limitations of a printing process in mind. Any publisher who can control his editorial and advertising material in this manner can probably get the most for his money out of any one of the three major printing processes.

A growing number of publishers find they are increasingly unable to control the copy which their editorial and advertising departments want to use.

With the increased popularity of candid camera shots taken under difficult lighting conditions, with the increased use of natural color photography, and particularly with the increased appreciation of the journalistic value of pictures, publishers have been increasingly unwilling to reject a story-telling picture because it wasn't up to the standard for the particular printing process they were using.

In the newspaper field this is most dramatically illustrated by the quality of some of the radio-photographs from Europe which appeared last September. They were far below usual standards and yet they told such an important story that they could not be omitted.

Thus the emphasis is shifting from the printing process to the copy. The production department of a publication is given the copy and must get the best possible results with it. Under such circumstances, it makes sense to see if another printing process could do a better job with the copy—if you can't fit the copy to the printing process, the logical alternative is to fit the printing process to the copy.

The use of more than one printing process in a single issue of a publication may seem to be an expensive and impractical procedure, but experience indicates that the cost increase is not prohibitive. More and more publishers are finding ways and means to combine a variety of processes in their publications. Naturally, it's apt to be expensive to use more than one printing process on a single page, as we do in most of the main editorial pages of *Fortune*—gravure for the illustrations and letterpress for the type. But sometimes it's less expensive and more effective to shift a color insert from four-color letterpress to four-color offset. Many

(*Continued Col. 1, Page 18*)

**Production Manager of* Fortune *magazine. Abstract of address given at dinner meeting of New York Young Lithographers' Association, January 12, 1939.*

Purchasing Agent Discusses

By EDWARD SCHULTZ*

AT the outset of our discussion on processes we shall use, I'd like to state that no one can give any definite rule as to what process to use to produce different kinds of advertising material. Every advertising piece, as you know, is a tailor-made job, and therefore, each new job has to be taken on its merits and all points considered before a process is decided upon.

The question of why and when we buy lithography is the one which interests you. However, in order to explain that, we naturally have to bring in the two other processes, which after all, we also use. To reach some conclusions let's classify somewhat the three processes so that we're all thinking in the same direction.

In our Purchasing Department we are given a pretty free hand in the selection of the process, as long as we give the Advertising Department what it wants. The Advertising Department naturally is composed of the people we are serving, just as the printer and lithographer are serving us and we, as you, must always keep in mind that we must satisfy by a good product. But what constitutes a good product varies from your viewpoint and ours.

On the points to be considered[1] we must pit our experience and preferences for the various

(*Continued Col. 2, Page 18*)

**Purchasing Agent, Standard Brands, Inc. Abstract of address given at the dinner meeting of the New York Young Lithographers' Association, January 12, 1939.*

[1]*Just previous to this statement, the speaker enumerated the points to be considered by the purchasing department as to what is to be used when art work and copy reaches the desk. These are as follows: Use of media, service needed, nature of art work, paper stock, special conditions and price.*

EDITOR'S NOTE:

Production and mechanical executives generally should be interested in the technical opinions of executives in the Graphic Arts Industry with respect to the utility of each of the three major printing processes. These gentlemen spoke at a recent meeting of the New York Young Lithographers' Club.

By reason of their intimate contact with these processes in handling and buying printed matter, their appraisals are interesting. We believe they have tried to be fair. At least, we believe each is sincere.

Because of the editorial nature of Printing EQUIPMENT Engineer, *and because our readers are associated with the production and mechanical side of the Industry, all discussion about postage and strictly business opinions have been eliminated from the discussions.*

Advertising Agency Production Manager Discusses

By GEORGE DERNLEY*

I WANT to stress possibly more than anything else the advertising agency's purchasing. A very important point to consider is the fact that the advertising agency is in the peculiar position of not spending its own cash but is custodian of appropriations placed in its care by client organizations.

We, therefore, have to be doubly sure when our orders are placed, we must be in a fairly impregnable position as far as criticism of our purchasing ability and selection of process is concerned. These are our opinions based on experience and subject to change as soon as some of the other mediums prove their ability to do the same, or better at a lower cost.

Letterpress or Cameo—Printed usually on a coated paper gives a sharp result with a flexibility of plates and a manipulation of makeready and inking that we don't believe can be secured in any other process for certain types of work.

Offset-Lithography or Planeography—Soft, beautiful effects printed upon various types of stock finishes that no other process can approach with the same consideration of cost. Speed in manufacture that is at times remarkably surprising and with results that are admirable.

Intaglio or Rotogravure—Gives high-speed results at economy prices on light weight stocks with not too much flexibility of etched cylinder taking a few liberties with your register, both color and folding, but with a brilliance of color in inks that is enticing.

Letterpress

Let me show you why we select letterpress for some of our work. We handle the Congoleum-Nairn account. The reproductions in the sales promotional piece must be an exact match of the floor covering the client produces and we and the client are particularly fussy about the color match.

The smooth surface floor covering that our client is merchandising has sheen and lustre. Therefore a white, shiny stock must be used which will reflect light back and through the halftone dots to give lustre. The inks must be dried so that the finished result has sparkle and firmness of color.

Our etching must have flexibility so that the colors of the material can be approximated quite closely, and it is only after two or three proofings that the etchings are usually approved.

When we go on press we must have further flexibility. Etchings are made at various times of the year and are many times combined in large areas in one printed piece so that compensation must be provided for by press equipment in makeready, flow of ink and impression.

With the material to be reproduced running the full spectrum of color tints and shades and

(*Continued Col. 3, Page 18*)

**Production Manager of McCann-Erickson, Inc. Abstract of address given before recent meeting of New York Young Lithographers' Association, January 12, 1939.*

Mechanical Research Conference Members—
ASK US—WE'LL SHOW YOU
Modern Machinery Produces THE TIMES-UNION
TIMES — UNION
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Editorial

The Mechanical Conference Situation

THE reason the various sectional newspaper mechanical conferences have sprung up is that no one organization has satisfied the technical requirements of small, medium and large papers in any two or three-day conference. Newspaper manufacturing technique is a tremendous subject. There is a wall between the metropolitan dailies and the smaller dailies with respect to mutual technical discussion. While each is publishing a product of similar nature, mutual discussion is impossible because of volume, equipment and personnel. This, we believe, explains the multiplicity of newspaper mechanical conferences. The interests of the larger papers are important (in fact, they're dominant) because much of the pioneer investigational work conducted by them is of benefit eventually to the smaller plant. At the same time, the smaller paper executive feels his problems are extremely important and must be discussed with executives of other papers of similar size.

We do not believe the existence of the A.N.P.A. Mechanical Department as the dominant newspaper technical authority is in jeopardy. Ultimately, we believe its destiny is in the field of scientific newspaper research. The department, by virtue of its sponsorship and its resources, is dominant. It is supported by publishers in all but two states in the union. It has a background of twelve mechanical conferences and an unmatchable wealth of technical material assembled by Manager W. E. Wines over a twelve-year period. As a matter of fact, the A.N.P.A. Mechanical Department is the only agency which has published permanent and complete records of newspaper technical conference proceedings for reference purposes.

As a desirable widening of its activity and because some printing research activities overlap, perhaps correllated research could be conducted under supervision of the Mechanical Department with government cooperation in similar manner to that of the recently founded and ambitious program of the Craftsmen's Research Bureau and other industries now enjoying government cooperation.

A.N.P.A. membership consists of large and small papers. To avoid the apparent drift into a "big paper" conference perhaps its programs could be partially arranged to include multiple-simultaneous clinics with corollary sessions immediately following adjournment of each clinic. The clinics could be divided into large and small-paper groups.

It would be our suggestion that the results of the corollary meetings (and the results of A.N.P.A. scientific research if established later on) be made available in bulletin form to anybody—members and non-members—at a nominal price if necessary.

How It Was Managed

19 newspaper technical clinics of which
17 were held simultaneously
3 hours average time for each
51 collective hours of discussion participated in by
300 registered newspaper executives, manufacturer and supplier representatives
2 corollary sessions following clinic adjournment held on two different days

THE holding of 17 technical clinics at a newspaper mechanical conference would seem to be insurmountably difficult. The difficulty disappears when you are told that 17 are held simultaneously, followed immediately by corollary sessions. At the recent New York State Publishers' Association Mechanical Conference held in the Rochester Athanaeum and Mechanics Institute buildings, the clinic sessions were divided as follows: 7 composing, 1 engraving room, 3 stereotype, 4 pressroom, 1 publication desk and 3 photographic.

Each of the clinics assembled to consider a stated program of from 4 to 25 mechanical and production problems.

After each clinic adjourned, the clinic chairman, secretary and stenographer prepared a comprehensive and well digested report which was presented to a corollary meeting, as stated above, in the afternoon of the same day and continuing over the next morning until all of the clinic reports had been exhausted.

Very fine team work between the sponsoring New York State Publishers' Association, Dr. Ellingson and faculty of the Athanaeum and Mechanics Institute, John A. Burke, Production Manager, Gannett Newspapers, and printing equipment and supplier representatives brought about a successful mechanical conference. While the clinic idea is not a new one, it was the idea of Mr. Burke that by holding numerous clinical sessions simultaneously a great deal of ground could be covered. The executive of course must choose the clinic in which he is most interested.

Now, as the result of limiting his attendance to just one clinic he was not penalized by his inability to attend one or more of the other clinics in which he might also be interested. By attending the corollary sessions after clinic adjournment he could obtain the well digested and collective opinions of those in attendance at other clinics.

It is frankly admitted by several of those associated in the management and planning of the Rochester Conference that the first meeting was purely an experiment. Fundamentally, we believe the plan to be sound. As a result of the first meeting, it appears refinement and improvement will be made at next year's conference.

Faculty Members of Mechanics Institute, Newspaper Mechanical Executives and Manufacturer and Supplier Representatives Mingle at Mechanical Conference in Rochester.

1—F. W. Schnell, R. Hoe & Co.; F. S. Barr, Dayco Newspaper Div., and Prof. Byron Culver, Supervisor, Department of Publishing and Printing, Rochester Athanaeum and Mechanics Institute.

2—Dr. Mark Ellingson, President, Rochester Athanaeum and Mechanics Institute; Peter B. Schultz, Photo-engraving Superintendent, Albany Times-Union, *and C. Harold Larson, Chemco Photo-products, Inc.*

3—Marion F. Auchter, Secretary to Mr. Burke; George Fuller, Stereotype Superintendent, Cleveland Press; *John A. Burke, Production Manager, Gannett Newspapers, Inc.*

4—Mr. and Mrs. A. L. Cushman, Cushman Electric Co. attended the Conference and demonstrated offset motor for line-casting machines.

5—Edward F. Grenier (left) and "Scotty" Campbell of New England Newspaper Supply Co. with Miss New England who presented a carnation to each person attending the conference.

6—Arthur Burns, Mechanical Superintendent, New York Herald-Tribune, *and H. F. Blankenbiller, General Electric Company.*

7—Alexander B. Kramer, Pressroom Superintendent, Syracuse Post-Standard, *and Charles Frederickson, Mechanical Superintendent, Westchester County Papers, Yonkers.*

8—D. B. Crane, Bingham Bros. Co.

9—This sign, prominently displayed over the directory board in lobby of Rochester Democrat and Chronicle *and* Times-Union's *fine building welcomed all visiting executives, and with pride suggests that modern equipment is used to produce both papers.*

10—T. A. Ryan, International Printing Ink Corporation and Fred C. Grumman, Merganthaler Linotype Co.

11—Richard Fosdick, Mergenthaler Linotype technician, demonstrates late Model Linotype to A. H. Howard, Hornell Evening Tribune *Mechanical Superintendent.*

12—William J. Knoll, President, H. B. Rouse & Co., demonstrates Rotary Mitering Machine to interested executives.

13—F. Mikolite, Composing Room Superintendent, Geneva Times; *Amos G. Hoffman, Intertype Corporation; Walter Kettle, Mechanical Superintendent, Binghamton* Press; *Herman Freund, Chief Engineer, Intertype Corporation; Leon W. Taylor, Mechanical Superintendent, Corning* Leader.

14—W. L. Marks, Stereotype Foreman, Utica Press; *Frank A. Kopp, Wood Newspaper Machinery Corporation; Adam J. Schreiber, Stereotype Foreman, Rochester* Times-Union; *Edgar A. Mills, jr., Manager, Eastern Newspaper Supply Co.; Raymond Harvey, Stereotype Foreman, Elmira* Star-Gazette.

15—Walter H. Moffitt, American Type Founders; Mr. Moffitt also is president of the Rochester Craftsmen's Club; George Morrison, President, Milwaukee Saw-Trimmer Corporation; R. J. Oliver, Composing Room Superintendent, Binghamton Press; *Richard Seymour, Matrix Contrast Corporation.*

16—William J. Carey, J. M. Huber Ink Co.; Arthur Burns, Mechanical Superintendent, New York Herald-Tribune; *R. P. Lalor, J. M. Huber's New York Manager; Eugene Abearn, Hearst Production Management, New York.*

17—Frank S. Barr, Engineer, Dayton Rubber Mfg. Co.; Leon A. Link, Production Manager, Cleveland Plain Dealer; *Eugene D. Jagereski, Mechanical Superintendent, Albany* Knickerbocker News.

18—Charles H. Stout, Vice-President, Matrix Contrast Corporation; H. L. Higgins, Composing Room Superintendent, Buffalo Times; *Peter Loesch, Mechanical Superintendent, Erie (Pa.)* Dispatch-Herald.

19—Rochester Mechanics Institute printing students were thrilled during conference days. Here is a group taken in the Institute's laboratory. Some of them served as pages.

20—Bernard F. Garrity, Mechanical Superintendent, Hartford (Conn.) Times; *John D. MacIntosh, Mechanical Superintendent, Newburgh-Beacon* News.

Conference

Consisting of clinics, corollary meetings and equipment and supplies demonstrations attended by 300 at Rochester Mechanics Institute

By MAC SINCLAIR

THE Mechanical Research Conference sponsored by the New York State Publishers Association was held in the printing and photographic laboratories of the Rochester Athanaeum and Mechanics Institute, Rochester, New York, Monday and Tuesday, February 6 and 7. At the opening session on Monday morning, Karl H. Thiesing, Executive Secretary of the Publishers Association, introduced Dr. Mark Ellingson, President of the Institute, who extended welcome to those in attendance at the conference. Approximately 300 persons registered. Dr. Ellingson acted as host to the conference. He was assisted by Byron G. Culver, Supervisor of the Department of Publishing and Printing and by R. Randolph Karch, Technical Supervisor, both of whom acted as Co-Chairmen.

After Dr. Ellingson's address of welcome, Mr. Thiesing introduced Professor Culver who explained the conduct of the program and who dispatched the clinics to meeting rooms.

In all, 17 clinics were held simultaneously. A brief resume of the report of each of the clinics to the corollary meetings is given below.

Because of the tremendous amount of technical material reported, and the further discussion taking place at the corollary meetings, it is impossible to report fully, but it is hoped that enough findings have been included to give our readers some idea of the proceedings. It is thought the proceedings will be published in full at a later time for the use of executive members of the New York State Publishers Association.

A get-together was held Sunday evening at the Rochester Hotel at which time everybody in attendance was given the opportunity of getting acquainted. Music and singing were featured.

On Monday evening at Hotel Powers a conference dinner was held. "Bugs" Baer presided as toastmaster. Speakers were Dr. Mark Ellingson of Mechanics Institute; Burrows Matthews, Buffalo, President of the Publishers Association; Frank E. Tripp, Gannett General Manager, and M. V. Atwood, Associate Editor of the Gannett Newspapers.

Composing Room Clinics

Linotype and Intertype

Walter Kettle, Mechanical Superintendent, Binghamton *Press*, was named chairman. Amos Hoffman, Intertype Corporation executive, delivered the clinic report to the general meeting Monday afternoon.

A few of the investigational questions reported upon were as follows: The advantages of setting food copy on the newer models of machines were discussed. It was thought advisable to educate the advertiser to confine his composition to some certain faces on account of the matrix manufacturers having to go through the process of continually cutting new logotypes when type face designation is changed frequently.

In setting news copy on the machine it was agreed that long takes are more economical by far, but under certain conditions where time element is involved, the story should be split into takes according to the number of machines available to get the story in type as quickly as possible.

The quadding and centering devices may be had without the spreading device. Devices used on both Linotype and Intertype machines were explained by Service Man Dick Fosdick and Chief Engineer Herman Fruend of the two companies respectively.

General Composing Room

Joseph Estabrook, Composing Room Superintendent, Utica *Observer-Dispatch*, served as chairman. George Wolfgang, Composing Room Foreman, Schenectady *Union-Star*, was named secretary.

After discussing the advantages and economy in the use of metal base material, it was recommended that strip metal base has certain advantages over steel base in the non-distribution system, where the system is used 100% because of its speed and flexibility. However, certain of the executives present think the better method is to have both steel and strip metal base inasmuch as each system has certain advantages over the other.

With respect to the question: "What can be done to get electros of national advertisements in uniform thickness," it was recommended that this conference go on record as favoring national advertising electros in uniform thickness being brought to the attention of the A. N. P. A. Mechanical Conference in Philadelphia next June.

It was suggested by this clinic that a letter be addressed to the composing room saw manufacturers that the development of an automatically-fed saw table for all composing room saws be worked out.

The advantages of a page closing schedule are obvious providing the necessary cooperation is secured from all the other departments. Page closing schedules eliminate the bottleneck at closing time and relieve any "plug" in the stereotype department and late press starts.

In answer to the query, "Should Monotype and Elrod base material be used more than once?" the answer was that the use of this material more than once is governed by the conditions prevailing in each plant. However, if used more than once, its height should be checked carefully the second time it is used.

It was the consensus of opinion that 72 point strip metal base used in combination with 6 point material; 48 point base alone or 36 point alone would be the most satisfactory sizes for general use.

It was developed by discussion at the clinic that possibly from 15 to 25% of ad room costs are affected by the store proof alterations.

Makeup Clinic

The Makeup Clinic was presided over by Elmer Fredericks, Composing Room Foreman of the Rochester *Democrat* and *Chronicle*.

With respect to the query: "The best way to alleviate last-minute rush in getting editions to press," it is recommended that the proper way to alleviate last-minute rush in getting editions to press on time under normal conditions is to follow a definite and agreed-upon deadline to be broken under abnormal conditions only with the mutual consent of the managing editor, advertising manager, circulation manager and composing room executive. Holding departmental executive meetings to thresh out problems was also urged.

It was felt that in order to get away from the curling up of rule cast on 2 point base that the best way to eliminate this condition would be to cast the rule on 4 or 6 point base.

The Frederic W. Goudy Fund

A drive, calling upon the entire Graphic Arts Industry for contributions to aid the man "who has contributed more to the progress of the industry than any other man of his time" was started by *Printing* after the fire which destroyed Mr. Goudy's shop which was housed in a 150-year-old mill at Marlboro-on-Hudson, New York, January 26. Shortly after the fire, *Printing* received several checks, the giving of which was interpreted to be a spontaneous expression from the printing industry. Those who wish to participate may make checks payable to Frederic W. Goudy and mail them immediately to *Printing*, 41 Park Row, New York, N. Y. Editor Trotter states all funds will be assembled by *Printing's* officers and editorial staff and presented to Mr. Goudy to use as he sees fit. Plans for the presentation have not been formed, but it is recalled that the great type designer will observe his 74th birthday on March 8.

The fire wiped out much of the work of 40 years destroying 75 or more of the original type designs and matrices of the 107 type faces designed by Mr. Goudy, more than any other designer has ever produced. It also destroyed the precision instruments used in designing his masterpieces, all the original type and the patterns for re-casting, and the press on which the English printer, William Morris, produced the Kelmscott Chaucer. Much of the material lost in the fire undoubtedly would have gone to museums eventually.

Exhibitors and Demonstrators at Rochester Mechanical Conference

Exhibitors

Lanston Monotype Company, Monotype parts and material.

Partlow Corp., Metal temperature controls.

Goodyear Tire and Rubber Co., Press packing and samples of rollers.

Intertype Corp., Display of more recent improvements.

Wood Flong Corp., Exhibit of mats, molding materials, double truck plate for tubular press.

Wood Newspaper Machinery Corp., Stereotype plate indicating results of vacuum back casting.

New England Newspaper Supply Company, Display of press packing.

Greater Buffalo Press, Panel Display.

Ludlow Typograph, Display of literature.

Mergentheler Linotype Co., Exhibit of 4-Point column rule and quadding device.

Linotype Parts Corp., Panel Display.

Rochester Stationery Co., Du-More Chair exhibit.

Eastern Newspaper Supply Co., Press packing and molding materials.

Bingham Bros. Co., Rollers and splicing gums.

Cushman Elec. Co., Line-Composing machine motors.

United American Metals Corp., Metals and feeder casting molds.

Machines and Demonstrators

The following machines and supplies were demonstrated by manufacturers, representatives at the New York State Publishers' Association Mechanical Conference, held in the Mechanics Institute.

Composing Room

Blue Streak Model 30 Linotype, with Six-Mold Disk. Demonstrator: Richard Fosdick.

Model G4-4SM Intertype with Six-Mold Disk. Demonstrator: Amos Hoffman.

Odd Measure Attachments for Intertypes and Linotypes. Demonstrator: Amos Hoffman, Intertype Company. Demonstrator: Richard Fosdick, Linotype Company.

Black and White Process and Service (Matrix Contrast Corporation). Movie: "Story of Black and White Matrix Contrast Service." Demonstrator: Charles Stout.

Klean-O-Mat Process. Demonstrator: Stedman C. Humbert, Chief Engineer.

Monotype Giant Caster, Material Maker and Monotype Type and Rule Caster. Demonstrator: James V. Ferraro.

Ludlow Typograph, with Self-Quadding and Self-Centering Sticks. Demonstrator: Vincent Weber.

Elrod Material Maker and Ludlow Supersurfacer. Demonstrator: Joe Humason.

Mergenthaler Linotype All-Purpose Machine. Demonstrator: Peter Burton.

Partlow Temperature Controls for Type Casting Machines. Demonstrator: W. F. Scheiderich.

Cushman Offset Motor and Drive for Linotype and Intertype Machines. Demonstrator: A. L. Cushman.

Mohr Saw. Demonstrator: William J. Easton.

Rouse Power Mitering Machine and Rouse Band Saw. Demonstrator: Wm. J. Knoll.

Hammond Trim-O-Saw. Demonstrator: Lee Hammond.

Milwaukee Saws and Trimmers. Demonstrator: George F. Morrison.

Shell Cast Attachment for Ludlow, and Spaceband Cleaner. Demonstration: Fuller Machine Co., Gerald S. Fuller.

Plate-Tak, (Eastern Newspaper Supply Co.) Cut Mounting Tape. Demonstrator: Edgar A. Mills.

Richards Router and Clipper Saw. Demonstrator: P. A. Richards.

A-T-F Saw-Trimmer. Demonstrator: Walter Moffitt.

Press Room

Printing One, Two and Three Colors and Black on Black and White Press, Using 7/16 Inch Plates and Standard Stereotype Equipment. Demonstrators: W. W. Oliver, Manager Color Plant, and Lloyd Florey, Supt. Press Room, Color Plant.

Various Combinations and Makes of Press Packing. Demonstrator: The Cork-Pak Co., Fred H. Paulman.

New England Newspaper Supply Co. Demonstrator: William F. Grenier.

Goodyear Tire and Rubber Company. Demonstrator: A. Q. Ellington.

Vulcan Proofing Co. Demonstrator: George Chalmers.

DeVilbiss Spray System. Demonstrator: J. L. Folks.

Different Makes of Rollers, Rubber and Synthetic. Demonstrator: Vulcan Proofing Co., George Chalmers.

Fabric Covered Ductor Rollers. Demonstrator: Vogt Roller Company, Fred Finzer.

Stereotype Room

Stahi Vacuum Scorcher. Demonstrator: Don Richards, at *Times-Union*, *Democrat & Chronicle* Stereotype Room.

United American Metals Corp. Demonstrator: Earl Miller.

General Equipment

Photostat Machine for Making Duplicate Copies of Ad Copy. Demonstrator: C. J. Leaty.

Engraving Room

Scherer Roll-up Method and Gibson Bump-up Process, Harold M. Pitman Co., in Engraving Room, *Times-Union*. Demonstrator: John Storck.

Monotype Material Maker

James Ferraro, Lanston Monotype Machine Company, was named as chairman, while John D. MacIntosh, Newburgh-Beacon *News* Mechanical Superintendent, served as secretary.

In answer to the question "Will a draft have any effect on body and face of material with the metal running at regular temperature?" it was decided that draft has no effect as the mold cavity and the mold itself are inclosed in one unit.

It was brought out that the spring box rod should never be removed from the box, except in case of accident because the factory only has the proper jigs. The box should be returned to the factory for attention.

Ludlow and Elrod

Mechanical Superintendent, Walter A. Hofmann, of the Long Island *Daily Press*, Jamaica, presided as chairman.

All of the latest improvements in the Elrod strip-casting machine came in for considerable discussion. The metal pot thermostat unit, especially is very sensitive when the temperature of the metal can be held within extremely close maximum and minimum temperatures.

The later model Elrods, decided those newspaper representatives present who have had experience with both the old and new models, that a conservative estimate in increased production is 50%.

Composing Room Metal Clinic

Wesley L. Kester, Mechanical Superintendent, Niagara Falls *Gazette*, presided and Bert Lipe of Blatchford Metal Company, served as secretary.

An imposing list of 25 questions pertaining to composing room metals were discussed at this clinic.

It will not be possible to report on this clinic in this article other than that a considerable portion of the topics bore directly upon the mal-adjustment of metal by the introduction of zinc, copper, and other impurities, the proper remelting of metal and the proper working temperatures.

It was brought out that frequency of metal analyses is dependent upon the size of the composing room. In a large daily paper the metal should be analyzed once a month; for the smaller daily, once every three months is sufficient.

Samples for analyses should be composed of slugs or sprues collected from all operating machines.

Monotype Giant Caster

Eugene D. Jagareski, Mechanical Superintendent, Albany *Knickerbocker News*, presided and Curtis Fisher, Lanston Monotype Machine Company, served as secretary.

In discussing the prevention of breakage of the spring clip that engages a latch on the pump bell crank connecting rod, it was stated that the trouble can be prevented by operator engaging the pump at the proper time and by having proper alignment of the spring. It is recommended by the committee however, that the design of this spring could be improved upon.

From 7½ to 19½ r.p.m. according to the thickness of the base being cast, is the proper operating speed for the Giant Caster.

In order to keep a check on Monotype sorts it was suggested that a button or color system be used. A chart of the type cabinet is placed on the end of each cabinet. When type is low in the case, a green push pin or button is inserted in front of the corresponding type drawer on the chart. If the case is out of any single type character, a red pin is used.

Publication Desk

Philip Brovitz, Publication Desk Head, Rochester *Times-Union* and *Democrat and Chronicle*, presided. William Baumrucker, Jr., of the New York *News*, served as secretary.

A general discussion on the conduct of publication desk system was carried on at this clinic. Several detailed questions related to smooth production came up for discussion.

When cuts and mats are supplied with copy, but are not illustrated, it was suggested that carbon tracings of mats and proofs of cuts be

(Continued on Page 48)

Opinions

(*Continued from Col. 1, Page 13*)

other magazine publishers find that they get more for their money when they use one process to print the body of the magazine and another process for their covers. Efficient grouping of the material which deserves special treatment helps to keep the cost down as low as possible. Newspapers are doing this in their color rotogravure sections and are certainly getting results which they could not obtain otherwise. Here, the increased quality that is obtainable by the introduction of another process justifies its use.

It is increasingly dangerous, therefore, for a publisher to make a decision to accept the limitations of any one process. His competitors may find ways and means to use a variety of printing processes—even in a single issue—and do a more efficient job of putting across the editorial and advertising content. I don't think many letterpress printers who have contract magazine business appreciate how much they'd be helping the publisher if they would recommend and make it easy for him to use another printing process for an insert which was not particularly suited to letterpress. Yet in the long run, this sort of cooperation between letterpress printers, lithographers and gravure printers would make for more efficient operation and benefit the trade generally.

New M. S.

W. E. Gibbons is appointed mechanical superintendent of the Peoria *Evening Star* and the *Sunday Morning Star* by President and Publisher Claude U. Stone, and has entered upon his new duties. He was assistant to

Mechanical Superintendent F. C. Hudson of the Hearst papers in Chicago for 15 years, who for the past five years has groomed Mr. Gibson. He is a member of the A.N.P.A. and for five years has attended all mechanical conventions.

Opens Supply House

Thos. D. Rawlings, formerly manager of Bridgeport Engravers Supply Co., has opened an engravers' and lithographers' supply house at 1468 West 9th St., Cleveland.

(*Continued from Col. 2, Page 13*)

processes. Let's examine these preferences and please remember that they are *our* preferences and opinions:

GRAVURE—We can classify gravure with special processes as silk screen, photo-gelatin, etc., as they all apply to certain specialty jobs, very short runs or very long runs where economy is necessary or advisable. This process at best suffers in quality comparison with letterpress or lithography due to poor type, register and page margins, but fits where economy is necessary and also has certain advantages on some pictorial effects.

LETTERPRESS—has the following advantages: (1) More faithful reproduction of illustrations, namely, Gelatin Dishes and Bakery Products. (2) Cleaner, sharper details when the art work calls for them. (3) More brilliancy—brighter tones. (4) Can do more in four color process than lithography. (5) Sharper type faces on the average owing to direct type or electrotype impression instead of photographed type. (6) Consistent color tone throughout the run. Both sides of the sheet will be the same tone value as compared to lots of lithography where lack of press and ink control give light and dark shades through the run and on both sides of sheet. (7) Privilege to rerun from one or more electrotypes small quantities on small presses at low cost. (8) Bound book of 50 or 100 pages where we print from type and can make typographical changes on each run.

LITHOGRAPHY—Those are the main letterpress advantages. Now, let's see the advantages of lithography: (1) Naturally on large media as posters or large displays, we choose lithography as letterpress is handicapped on plate sizes. Here incidentally we turn to our top notch lithographers. (2) Full color soft reproduction is obtained where art work calls for it. Again, we use top notch lithographers. (3) Black and white soft reproduction obtained of pencil or crayon drawings. (4) Choice of paper stock—Lithographer can use any grade of paper and get satisfactory results, whereas, letterpress is limited to coated papers and possibly super and English finish for good halftones. By lithography we can use as we often do, rough finish or antique paper. (5) We take advantage of typewriter or varitype for reading matter. Again, we reproduce by lithography direct from printed file copy on which type or electrotypes are not at hand.

Employment and Service

STEREOTYPE SUPERINTENDENT—Wants position in charge of department, or assistant in charge, of stereotype department in daily newspaper. Will go anywhere. Married; 33 years of age; 13 years experience. Reply Box 68, *Printing* EQUIPMENT *Engineer.*

EXPERIENCED ROLLER MAKER—Wants position as superintendent in roller manufacturing plant. Can sell if required. Twenty years experience. Understands all phases roller industry. Will go anywhere. Thirty-nine years of age. Married. Reply Box 69, *Printing* EQUIPMENT *Engineer.*

(*Continued from Col. 3, Page 13*)

then some extras and the absolute necessity to give and take etchings, makeready, etc., we feel that only the letterpress method of reproduction can meet the requirements. I say we feel that way only because no other process of reproduction has been able to do the job as satisfactorily although other forms of printing have tried to do as well or better.

Here is something that is not usually done in the printing industry but, as I said before, due to the fact that we may combine originals made over a period of a year into one form and we need an exact match of our progressives, we find it necessary to make a full color proof in advance of the regular press run, criticizing that proof and compensating for deficiencies from this first proof into the press run. Here, also, is brought out the point that the agency has as part of its obligation to the client the knowledge as to what result will or will not be obtained and suggested this form of advance proofing to the client as insurance against the otherwise mediocre result that would be obtained without this advance proofing.

And still further, letterpress lends itself to economical operation as, during the year, we are constantly electrotyping some of the originals or cutting down old electrotypes to use them in printing plants throughout the country in the reproduction of various types of folders, brochures, etc. No other process can render this type of service to our client and, therefore, in rug reproductions for smooth surface floor-covering we use only letterpress.

Rotogravure

Rotogravure has a niche all its own and fills it admirably. We have used it successfully in monotone, two color and full color gravure where we have needed an economical booklet on light weight paper that will mail for low cost with good strong color splashes. However, I am frank to say that register both in printing and folding has left something to be desired.

The fact that this process does not lend itself to manipulation of etching too successfully and it is hard to get the sharp contrasts that are so desired today in sales promotional material somewhat restricts us in a more constant use of this medium.

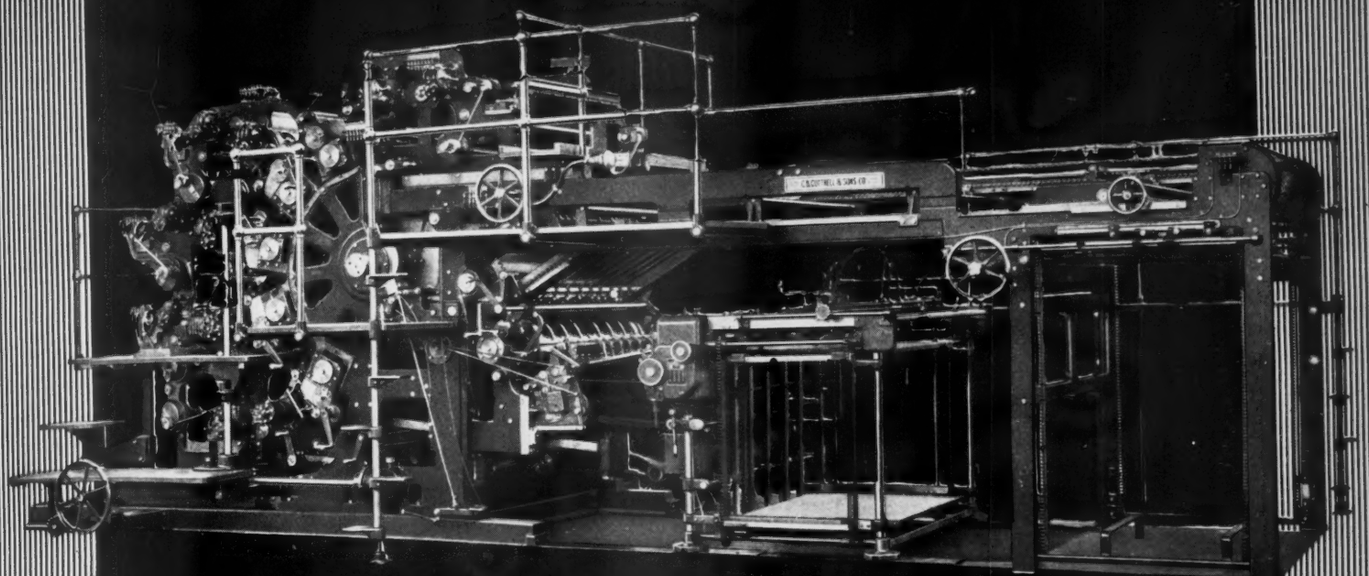
When we are faced with the necessity of producing huge quantities of a variety of syndicated or association sales promotional material, with dealer imprints, and we can combine them on a cylinder, make a fast run, with a cheaper mailing cost, rotogravure fits into our scheme of things very nicely. Some years ago we turned out a 2-color, 16-page book as a radio giveaway of which we are very proud. The rich tonal effects secured by this process were very good and we are quite proud of this low priced large quantity result.

Offset-Lithography

As a radio premium we had a book of music and songs to produce and here you may sit up straight as offset-lighography was the only method, considering the various problems we had, that could produce the job.

Our opinion in the agency first must be open to constant revising and changing. Any changes, however, must be brought about by the processes themselves in the way of new improvements, lower costs.

Now, it would seem from the above, that we are very much prejudiced in favor of letterpress but, to the contrary, our people put literally thousands upon thousands of dollars into lithographic work and the industry that has established itself with amazing rapidity.



COTTRELL

THE SECOND OF A SERIES OF ARTICLES PERTAINING TO THE DESIGN, CONSTRUCTION AND MAINTENANCE OF BUILDINGS FOR THE PRINTING INDUSTRY.

Planning the Printing Plant

By JAMES WILLIAM THOMAS*

AN AXIOM in planning is that if you take care of the big elements of a plan properly the minor elements will take care of themselves. This basic principle of arranging and relating space is true whether one is planning a house or a building to serve the complicated process of the printing industry.

One realizes after an analysis of a building designed to make possible the speedy and economical production of printing, that all departments, and everything in the plant are definitely related to the large room which houses the press, and that the proportions of this room are necessarily fixed by the shape and peculiarities of the press design; that this department is the only one in the building which makes a product that is not destroyed immediately after its manufacture and that the raw materials supplying the press should be brought to the room at a definite point and the finished product leave the room at a definite place.

Because the printing press, and other equipment throughout the plant, are such marvels of speed and manufacturing precision representing a large capital investment, poor planning (improper relationship of the various elements of the plan, causing production to slow up and adding to the cost of operation) is inexcusable. Equipment manufacturers have supplied the industry with efficient machinery to transfer the product of one department to another department, but good planning will cause less dependence on equipment of this character and shorten the distance of required travel.

As has been said, the pressroom governs, and to a large extent definitely fixes, the location of other departments; in turn, the location of the pressroom is influenced and affected by the place to which the raw materials should be brought into the building, and particularly in newspaper plants, where the finished product leaves the building. As the pressroom should have a close relationship to the mailing room and the trucking space, factors outside the building, such as traffic conditions, area to be served, etc., should also be studied before the location of the pressroom is decided upon and many graphic trials should be put down on paper before the location of these elements is determined.

Commercial printing plants and newspaper production plants have many requirements in common; many of the principles of planning applicable to one, apply also to the other; but as these principles, insofar as they apply to pressroom, paper storage and distribution, can be more readily illustrated by reference to newspaper printing, this discussion will be confined to the question of what is the proper plan for these elements in a newspaper production plant.

For a plant with one or more presses, having end feed, there is an economy if the paper storage is placed at one end of the pressroom and the distribution at the other (See Diagram A.) For a plant with one or more presses of the straight-line type with multiple units and one or more folders, there is an economy if the paper storage and the distribution room are located at the sides of the press. (See Diagram B.) Limitations of the site may prevent, or the needs of other departments may modify a literal acceptance of this ideal relationship, but it is obvious that these diagrams represent the shortest distances between the press and the stored print paper, and the press and the delivery platform. Plants large enough to justify machines to store and move print paper, and which have conveyors to take the finished paper from the folder to the mailing room, may minimize the importance of this close relationship, but the fact remains, that either mechanically or manually, the shortest distance between these areas results in less waste, less cost and less production time.

A successful pressroom can be obtained only if the designer of the building works in the closest possible cooperation with the manufacturers of the press and the press drive; this cooperation is particularly necessary when a straight-line unit type of press with reels is used. Not only are definite minimum heights, widths, and lengths established by the press, press drive, reels, folders, conveyors, etc., but the exact location of parts of the press determines the location of surrounding building walls and columns, and has an important bearing on minimum distances. All these "tight" points must be discovered early in the planning, and adjustments for them must be made. Height should be allowed below the trolly for balloon formers, and for the passage above the trolley of conveyors; widths must be secured at the loading position for the easy handling of rolls; space allowed for taking out cylinders, for folder deliveries and for a plate conveyor. The unusual height and area required for this room, the necessity for isolation from the building of the excessive weight and vibration of the press and the vast amount of electrical lines necessary, result in making this area, one not only difficult to design, but very costly; therefore, the planner and the publisher should exercise good judgment in allowing for press expansion, as fixed operating expenses may be paid on the cost of an area built, but never used.

There is so much copper wire and steel conduit used between the control room and the press that the location of the control room should be given careful thought; the ideal location, at the center of the press drive, is sometimes difficult to obtain without encroaching on areas more advantageously used for the storage of paper.

(To Be Continued)

*Architect and Printing Engineer, Cleveland, Ohio.

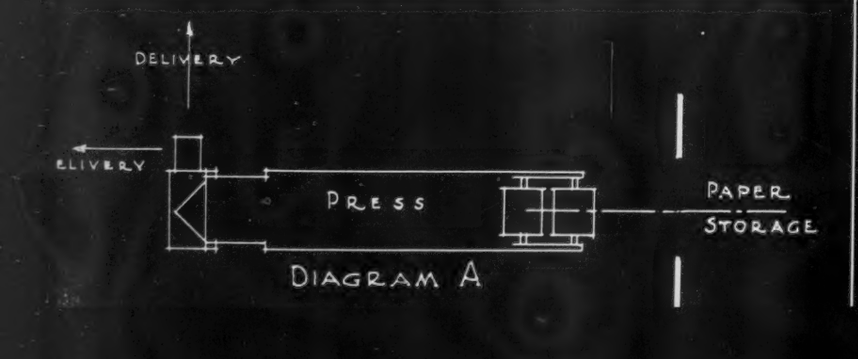


DIAGRAM A

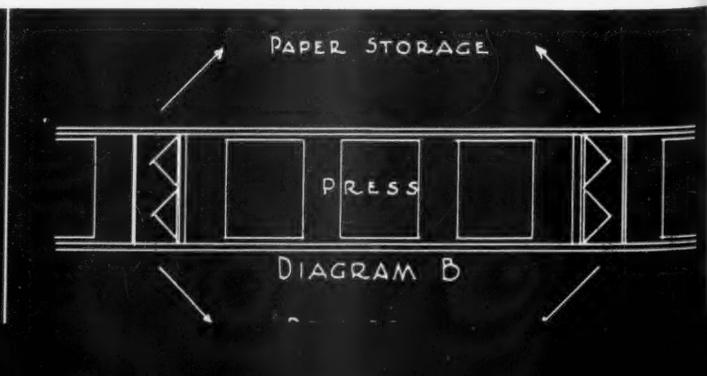


DIAGRAM B

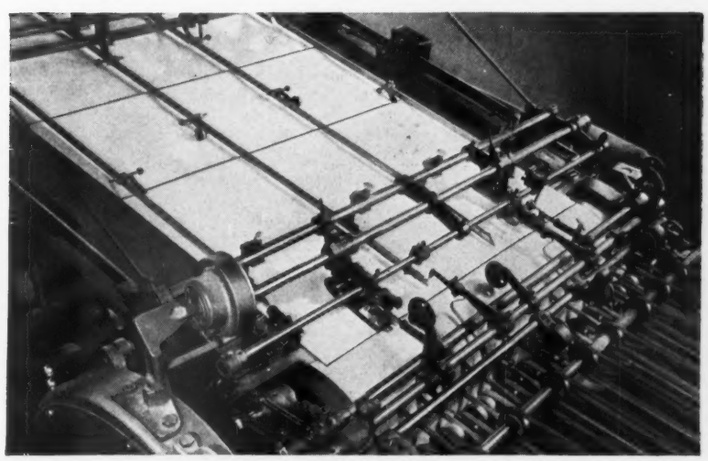
BLIND EXPERIMENTS MAY BE COSTLY

A survey of conditions is important in the selection of the right printing equipment. Your presses must be as modern as management methods.

The 1939 MIEHLE AUTOMATIC UNIT with Stream Feeding will give you precision printing . . . accuracy at high speed . . . increased production . . . lower maintenance charges.

Printers have found the Modern MIEHLE AUTOMATIC UNIT a profitable investment.

Write for facts—without obligation of course.



The new Stream Feeder built by the Dexter Folder Company delivers a constant flow of underlapped sheets to the front guides

MIEHLE Single Color Automatic Units. Three sizes, maximum sheets from 28x40½ to 41½x56 inches. Speeds up to 3000 I. P. H.

MIEHLE Two Color Automatic Units. Two sizes, maximum sheets 27x40½ and 32x45½ inches. Speeds up to 2800 I. P. H.

Motored by KIMBLE

MIEHLE PRINTING PRESS & MFG. CO.

CHICAGO NEW YORK

SALES OFFICES IN PRINCIPAL CITIES

IT PAYS TO PRINT IT ON A MIEHLE

Equipment - Supplies

Style MF Paper Drilling Machine

The Challenge Machinery Company, Grand Haven, Mich., has produced a foot power unit, designated as the Style MF Paper Drilling Machine to fill the gap between hand lever drills and heavy-duty models.

It is designed to meet the needs of the plant that has too much work for a hand-power model and not enough to justify investment in a heavier machine. In the MF the ball-bearing spindle is motor-powered, but the drilling head is pulled down through the stock by foot pressure.

On the Challenge MF Drill is a new type six-stop back gage with automatic trip. This device automatically trips the side guide after each hole is drilled. Operator keeps both hands on the stock until all holes are drilled and he is ready to change piles of paper. The only time he needs to touch the guide is to bring it back to starting position. By using the automatic trip back gage, faster operation is permitted.

The Challenge Style MF Drill will take up to 2 in. of stock in one lift and will drill holes

Challenge Style MF Paper Drilling Machine—motor powered, foot-operated.

from ⅛ in. to ½ in. diam. with center distances up to 18 in.

The Challenge Flexolite and sturdy, streamlined steel stand are included as standard equipment. Compartment for accessories is provided. Challenge Slotting and Cornering Attachments are available with this drill.

P-Double-E File No. 6H

C. & P. Cylinder Press

Having production speeds up to 4800 i.p.h., the Chandler & Price Cylinder Press is announced as having sheet sizes from 3¼ in. by 5½ in. up to and including 11 in. by 15 in. The press feeds and prints any stock from onion skin to 4 ply cardboard. Hairline register at maximum press speeds.

In the inking machanism there are 10 rollers in all from fountain to form, including

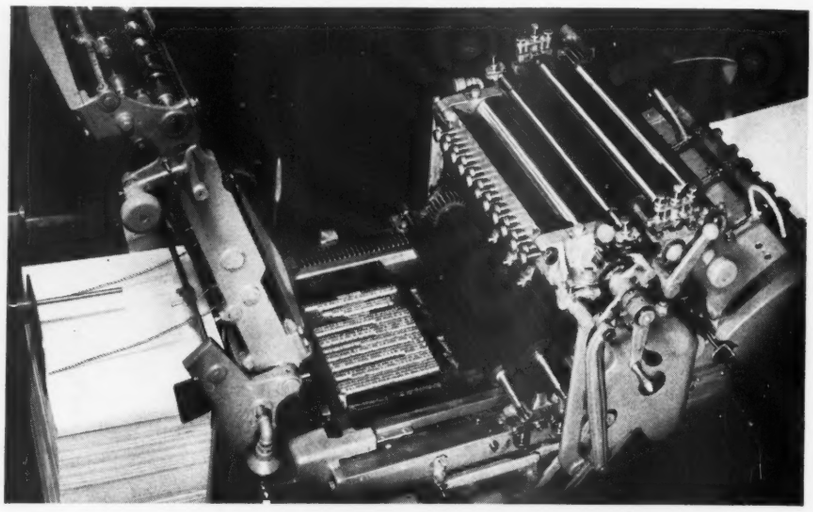


Illustration shows sectional parts of Chandler & Price Cylinder Press. At left, the hinged delivery has been raised, and at right, the hinged-counterbalanced inking mechanism, have been raised to show accessibility of the form itself from either side of the press. Both form rollers have cleared the form completely.

2 gear-driven vibrators, 1 auxiliary vibrator, one 3⅛ in. form roller and one 2 in. form roller. Form rollers do not reverse on the form. The closely spaced, double row of fountain screws are numbered to correspond with numbers on the delivery. For quick washup fountain may be opened up completely, the back of the fountain being hinged to drop its blade clear of the fountain roller without necessity for removing roller.

The feeding table takes 18 in. of stock at one lift—from 4000 to 5000 sheets of 80 lb. coated book. Table is raised to feeding height by turns of a crank. Automatic delivery table accommodates 18 in. of stock. Delivery table lowers automatically as feed table rises. Gas heater is built into the press.

The cylinder is completely accessible for makeready without removing any parts. A quick acting tympan clamp is provided which may be opened or closed by single one-hand motion. Grippers may be locked in open position when making ready. Two, three or four adjustable feeding fingers or sucker tips may be used as required for carrying the sheets from feed table to drop guides. Form is completely accessible from either side of press.

Micrometer side register adjustment is provided. Once set, it is claimed, register setting remains constant irrespective of press speeds or length of runs. Simple adjustment for changing right to left register, or *vice versa*, for work-and-turn color forms is provided.

All operating controls are grouped together on the operating side of the press.

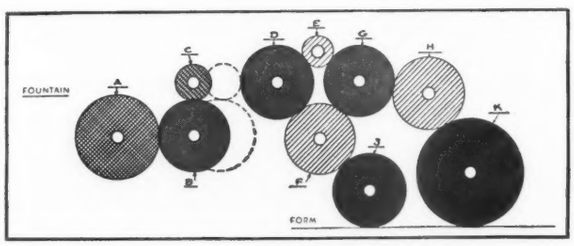
The press frame is a solid casting to eliminate vibration in operation. All working parts are castings or are machined from solid steel or bronze. The single motor required to operate the press is housed inside the press frame.

P-Double-E File No. 5LL9.

Transparent Impressions

Vandercook & Sons have acquired the right to pass on to all interested persons and arrangements have been made to make public the exact methods used by Thormod Monsen & Son, Inc., in making Transparent Impressions. These proofs are printed on both sides of cellophane or glassine. They do away with the necessity of photographing the proofs in the production of offset plates and rotogravure cylinders. Special methods of making proofs for photographic reproduction have also been developed. Complete descriptions of the entire process will be sent to all interested without cost. Address Vandercook & Sons, 900 North Kilpatrick Ave., Chicago. *P-Double-E File No. 2D.*

(Continued on Page 24)



Inking mechanism shown in diagrammatic form as applied to Chandler & Price 11 in. by 15 in. cylinder press. From fountain to form there are 10 rollers, including 2 form rollers. As is indicated in the diagram, the various rollers are designated as follows: A—2¼ *in. diam. fountain roller;* B—1¾ *in. diam. ductor roller;* C—1 *in. diam. rider;* D—1¾ *in. diam. distributor roller;* E—1⅝ *in. diam. vibrator;* F—2 *in. diam. vibrator;* G—1¾ *in. diam. distributor roller;* H—2 *in. diam. vibrator;* J—2 *in. diam. form roller;* K—3⅛ *in. diam. form roller.*

Presenting

THE *New* 100-WATT COOPER HEWITT FLUORESCENT *Lamp*

★ A 50-inch tubular light source with the greatest light output of any lamp of equal wattage

★ a cool blue-white light

★ long lamp life

★ low maintenance

★ low operating cost and high power factor

Here's a lamp that all industry will welcome. One metal working plant has ordered 1500, a textile plant 1000, and this before the lamp was ready for production. There's a reason! The 100-Watt Cooper Hewitt Fluorescent Lamp has ample light output for general industrial illumination. It eliminates shadows, glare and eye-fatigue. It gives more light per watt of energy consumed. Its blue-white light is comfortable and detail-revealing. It provides good industrial color discriminations. There is no bothersome light flutter. » » » It will pay you to learn of this latest and most productive industrial light source.» » » Write for complete details. Ask for a copy of the new bulletin. General Electric Vapor Lamp Co., 899 Adams Street, Hoboken, New Jersey.

GENERAL ELECTRIC VAPOR LAMP COMPANY

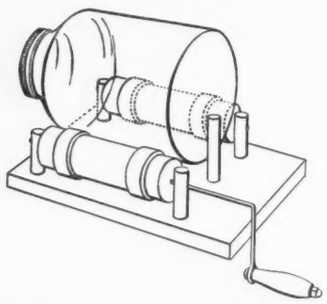
201F

Equipment

(*Continued from Page 22*)

Klean-O-Mat Junior Unit

The wide-mouthed, one-gallon capacity glass jar shown in the diagram is used for cleaning loose fonts of line-casting machine matrices by the Klean-O-Mat method. It is intended for supplementary use by Klean-O-Mat machine users who may have loose fonts or sorts to clean and for very small plants. The jar is of sufficient capacity to hold a font of matrices in 2½ quarts of solution. The jar is then laid sidewise on the rubber-tired rollers and the crank is turned by hand to cause the liquid to clean the matrices. Junior size cans of Klean-O-Mat Compounds, Nos. 1 and 2, containing exact amounts for cleaning one matrix font, are now available for use with the machine. Further information may be obtained from Klean-O-Mat Corporation.



LOOSE MAT CLEANER

Loose line-casting machine matrix cleaner, Junior Model, announced by Klean-O-Mat Corporation.

P-Double-E File No. 1G6.

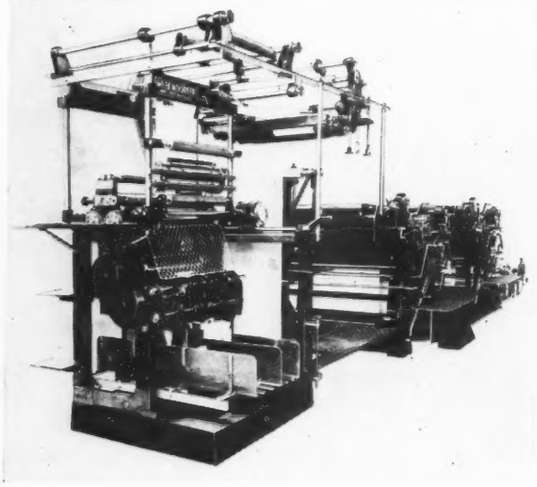
Two Colors on Both Sides by Offset Web Press

The largest lithographic magazine web press ever produced by Webendorfer-Wills, Inc., was recently installed at the Conde Nast plant, Greenwich, Conn. At 10,000 revolutions per hour it lithographs two colors on both sides of a 40 in. web delivering through a magazine folder 20,000 or 30,000 signatures, according to the nature of the product. The available printing area is 40 in. wide by 25 in. circumference.

One unusual feature of the press, which adapts it especially to magazine printing, is the imprinting unit. It consists of a plate and impression cylinder, conveniently located for instantaneous electrotype changes, to provide for imprinting magazine mastheads.

Another feature is electrical pressure regulation whereby the press units may be operated individually or collectively from a single push-button station outside the press. The press is operated entirely from the floor. Each unit has its own registering device attached to the cylinders for control over the register of each printing. Other features of press design include: Large ink units for ample distribution; anti-friction bearings; high-speed method of changing plates; oversize gears for smooth operation at high speeds.

Webendorfer-Wills, Inc., announce this press is also available with special attachments to handle other types of work: delivery of flat sheets, rewinding, numbering, perforating and folding units for newspaper and other commercial offset work.



Largest offset magazine web press ever produced by Webendorfer-Wills, Inc., will print two colors on both sides of paper. Available printing area is 40 in. by 25 in.

New Bag Inks

Cloth bags printed with the new bag inks, developed by IPI, retain their identification—name of the products, manufacturers, advertising, etc.—while they are on the dealers' shelves. When the cloth container is empty, all the printed matter may be washed out easily with soap and water.

Entirely new formulations were necessary to produce these inks. In order to prevent the inks running when they come in contact with water, they were made to wash out only when soap is used with the water. If the bags were exposed to rain, for example, or to splashing water, the ink would not run and taint the sugar or whatever the sack contained.

However, with the application of soap, the inks will wash out easily in five minutes or less. This washing-out leaves the bags white and untinted, and it may be accomplished by hand or by the use of a washing machine.

There are many pigments which cannot be used for this application. The IPI Laboratories determined what pigments were suitable by subjecting them to light fastness tests, tests for water bleed, tests for crocking (rubbing off) and for other characteristics. Similar tests were made with ink vehicles until a list of pigments and vehicles practical for washout purposes was compiled. This includes a wide range of colors.

In certain cases, it is desirable to leave a design printed on the sack while the advertising matter, name of the product, and so forth is washed out. A line of permanent bag inks was developed for this purpose. Thus bags printed in both permanent and wash-out inks can be left with only the design when the housewife has finished her washing. Occasionally, manufacturers want the bags to wash out in a tint, and this too, may be accomplished. Inks that stain the bag when it is washed with soap and water have been formulated.

To make sure that time will not harden any of these "wash-out" inks, tests were made which show that they will wash out freely six months after being printed.

P-Double-E File No. 5W.

Jack for Printing Plants

Templeton, Kenly & Company have introduced a jack for pressroom use, particularly in pressrooms where large flat-bed presses are used. The jack is named Simplex No. 310-A, and is intended for use in maintenance and installation work. The jack can be used vertically or at an angle, as it tilts, and it lifts from the cap, from the toe or from two positions provided by an auxiliary lift shoe that fits on the cap. Two lever sockets permit of its use in close quarters. A chain that can be used as a sling further increases its usefulness about printing plants.

New Gathering Equipment

The gathering of sheets by hand with speed and accuracy is of interest to printers and binderies. John M. Low & Company have placed on the market a Gathering Cabinet assemblage. The cabinets, of enameled steel construction, have 8 tilted bins or shelves of 500 sheet capacity, each bin stepped back about 2 in. and constructed to give the paper a fanned edge to facilitate gathering and prevent gathering more than one sheet at a lift.

The cabinets may be used as single units or in groups. A single cabinet accommodates from 8 to 40 sheets, the quantity varying with size of sheet and size cabinet used. Duplicate, triplicate, quadruplicate forms and sets containing as many as 8, 16 or 24 letterhead size sheets may be gathered at high speed from a single cabinet, the number varying with size cabinet used.

When three or more cabinets are used by one operator they are arranged in a circle and the operator gathers from a swivel chair in center

(*Continued on Page 46*)

ONE OF THESE COATING MACHINES WILL BEST FIT YOUR PURPOSE

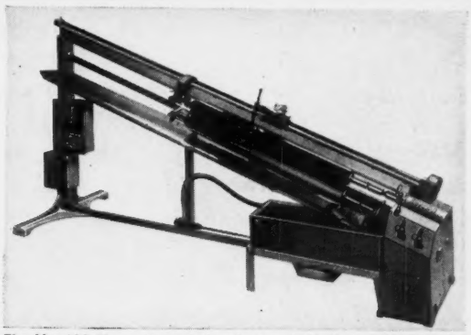
Ideal Process Rollers were introduced by Ideal fifteen years ago, and these years of experience in supplying the permanent base rollers with renewable surface have resulted in our designing a wide selection of Ideal Surfacing Machines, each built to best perform its function on the particular type of rollers you use.

Accuracy of coating, being the first consideration, is assured when applied with the Ideal Surfacing Machine designed expressly for the range of roller sizes you employ.

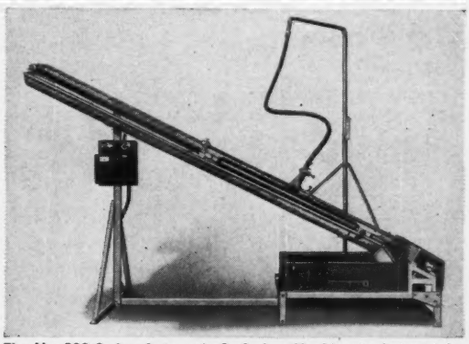
Let us analyze your plant so that a complete estimate can be given, and the most economical and accurate coating machine for your purpose can be recommended.

IDEAL ROLLER & MANUFACTURING CO.

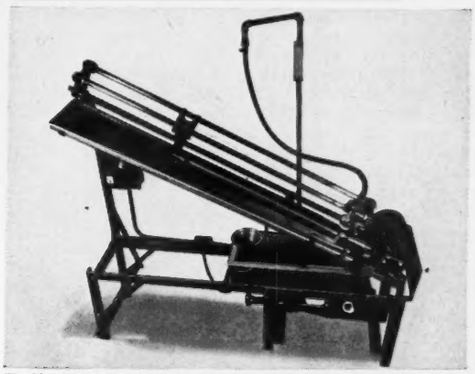
CHICAGO **LONG ISLAND CITY**



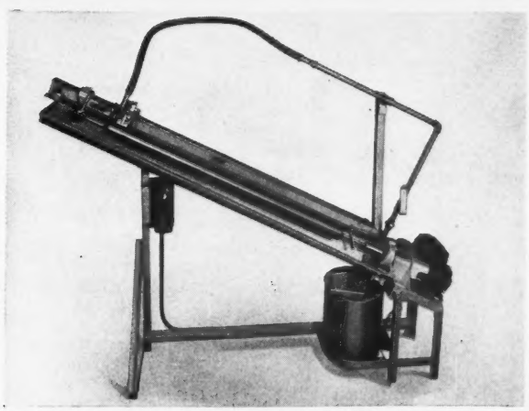
The No. 600 Heavy-Duty Series Automatic Surfacing Machine for coating two large press rollers at the same time. Three speeds allow for greater control of thickness of coating. Capacity: Handles two rollers at a time 3″ to 6″ in diameter and 116″ overall length.



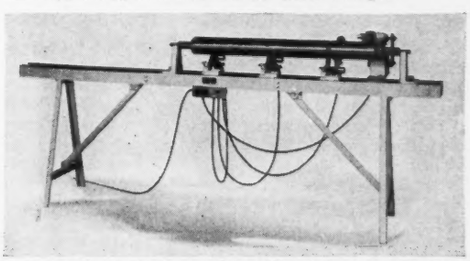
The No. 200 Series Automatic Surfacing Machine is designed for continuous coating of large press rollers. Built to withstand constant usage. Will apply uniform thin or heavy coating. Capacity: Handles rollers 3″ to 6″ in diameter and 118″ or 140″ overall length.



The No. 000 Series Surfacing Machine is sturdily designed for coating Bag Press Rollers. Built for continuous operation. Capacity: Handles rollers 1¾″ to 3¾″ in diameter and 56″ overall in length.



The No. 500 Series Automatic Coating Machine is designed to serve rollers used on Miehle or other flat-bed presses. This model is especially recommended for use in plants where coating requirements average three or four times a week. Capacity: Handles rollers 2″ to 3¾″ in diameter with an overall length of 84″ to 86″.



Sectioning Machine for Process Rollers (for split-fountain work). Automatically sections, seals and protects the base roller. Requires about one minute to section a roller. Adjustable to .0075″.

Paper Problems

By LETTER P. OFFGRAV*

I consider standardization the greatest problem in the printing plant. Despite highly developed testing technique in mills, the product varies greatly between deliveries and even within deliveries. This is one of the most serious obstacles we face in quality control.—PRODUCTION EXECUTIVE.

THE question of paper standardization involves a number of factors which complicate it considerably. The lack of standardization of printing quality is not altogether the fault of the papermaker. He is no printer, and from his point of view he is producing a relatively standard article in each of his products. The fact that these products may at times vary too much in printing quality is due in no small part to the printing industry itself. Most large industries can define their requirements in numerically measured technical terms, understandable by the supplier. Not so in the printing industry. The printer hands the paper man a piece of paper (usually woefully small and often dirty) and says: "Match this exactly." And it cannot be done.

There are more variables in papermaking than in any other industry, ninety-seven having been found in the paper machine alone. It is humanly impossible for anyone to make a lot of paper to an exact match of a single sheet.

Fortunately for the printer, some of the larger paper manufacturers are making a study of paper from the printer's point of view. This work requires the cooperation of printers, as not only must methods of measuring printability be developed and proved, but the limits of these tests within which a paper must fall in order to produce uniform printing have to be determined. With the information so far obtained these paper manufacturers have set up their own printing requirement standards and are learning how to keep their products within the desired limits.

It is hoped that there may be increasing cooperation between the paper and printing industries to determine the best methods of measuring printability, to say nothing of the limits within which the paper should fall, and how to control it in the course of manufacture to insure that it will be uniform from a printing standpoint.

**Editor's Note*—Many production and mechanical executives suggested printing plant paper problems in a recent questionnaire sent out by *Printing* EQUIPMENT *Engineer*. The problems bear directly upon the qualities of paper as they affect processing in the printing plant. We are pleased to announce that Letter P. Offgrav (obviously a *nom de plume*) will reply in future issues of this magazine. He will discuss the problems at randon without reference to their importance —it's apparent that he cannot discuss them all at one time. In some issues more than one problem will be taken up.

Iowa

Newspaper mechanical conference to be held May 15 and 16 in Des Moines—Program of merit

THE Thirteenth Annual Iowa Daily Newspaper Mechanical Conference will be held this year on Monday and Tuesday, May 15 and 16, at Des Moines, Iowa. Headquarters and meetings are to be held at Hotel Fort Des Moines.

The conference is composed of mechanical executives of newspaper composing, photoengraving, stereotype and pressroom departments.

The Iowa conference is a state organization but it has been decided again this year to invite executives from surrounding states to attend and take part in all discussions. Last year, executives from Illinois, Wisconsin, Minnesota, North and South Dakota, Wyoming, Colorado, Nebraska, Kansas and Missouri were in attendance, besides several coming from Ohio. This year all mechanical executives in the Mid-west are invited to attend.

It is planned to have prominent speakers address the conference on topics that are of utmost importance in producing better printed papers. Also, topics that are most troublesome and common, proposed by mechanical men themselves, will be discussed in round table sessions. Everyone is urged to send in questions for discussion at both the general and group sessions.

All machinists in charge of line and typecasting machines are urged to attend, as the program will include many timely topics and discussions of particular interest to them.

This year, ample room is available for the display of machinery and supplies. The conference not only welcomes but suggests that manufacturers and supply houses avail themselves of this opportunity to present their products to and meet the many delegates who will attend. Arrangements for displays should be made with Garry Riggs, manager of Hotel Fort Des Moines.

The committee in charge of program and local arrangements consists of Val Wells, chairman, superintendent of presses; Andy Jose, superintendent of stereotype department, and Harry T. Murphy, composing room superintendent, Des Moines *Register-Tribune*.

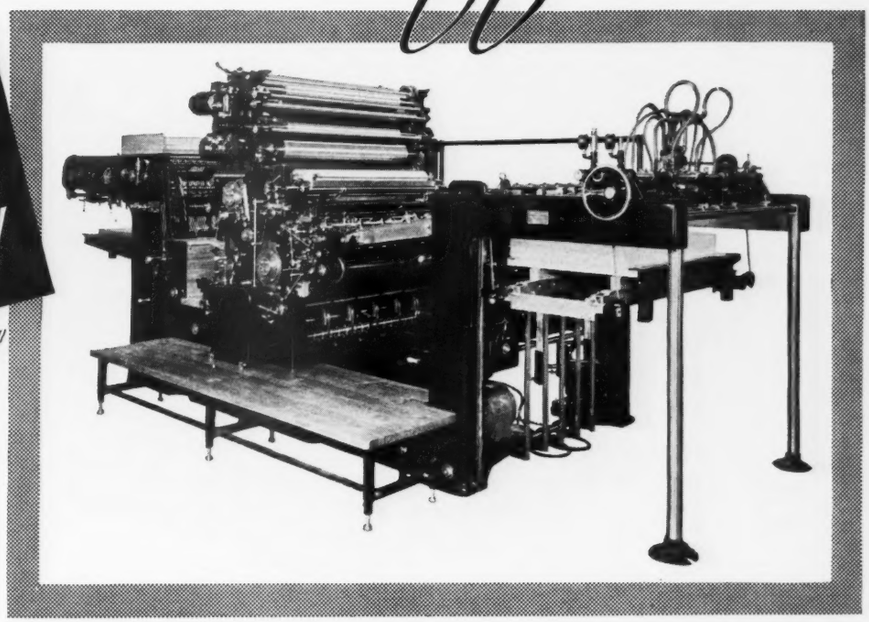
The officers of the conference this year are: President, Ed C. Funk, of the Waterloo *Daily Courier;* Vice President, Guy Chappell, of the Iowa City *Press-Citizen*, and Secretary-Treasurer, Paul Kamler, of the Clinton *Herald*.

Street With United American

William H. (Bill) Street has joined the staff of the United American Metals Corp'n in a sales capacity. Mr. Street is widely known.

Harris Offset..

as Modern as Tomorrow's Headlines!



Standardized as Units of Precision for Today's Increasing Demand... Built by Engineers who know Offset....

• Today's planning must include facilities for tomorrow's demand. Harris Offset presses are built by press designers who understand Offset development, who have a finger on the pulse of modern business—the business of tomorrow—and who design and make every working part of every Harris press. . . . Harris Offset is a standardized method of successful Offset.

A NEW STANDARD PROCESS IN *Plate Making*

Through research Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.

OFFSET IS THE MODERN METHOD

PIONEER BUILDERS OF SUCCESSFUL OFFSET PRESSES

HARRIS ○ SEYBOLD ○ POTTER ○ CO ○

General Offices: 4510 E. 71st Street, Cleveland, Ohio. *Harris Sales Offices:* New York, 330 W. 42nd Street; Chicago, 343 S. Dearborn Street; Dayton, 819 Washington Street: San Francisco, 420 Market Street. *Factories:* Cleveland, Dayton.

Register

Devices for newspaper stereo plates devised at Illinois *State Register* used successfully for r.o.p. color printing

By VERN WILLIAMS*

COLOR registration has been more or less of a problem in newspaper printing plants for a long time and many devices have been devised to facilitate the work. The Illinois *State Register* is equipped to print one color and black only but the need was felt, nevertheless, for some means of registering the color plates in the form, and also for easily and safely side registering the plates on the press.

I have developed two devices for that purpose, and they are working out satisfactorily in our plant. There may be better methods in use but as we are not experts in color work and have never had actual experience elsewhere we do not know in detail the methods used by others to obtain good register.

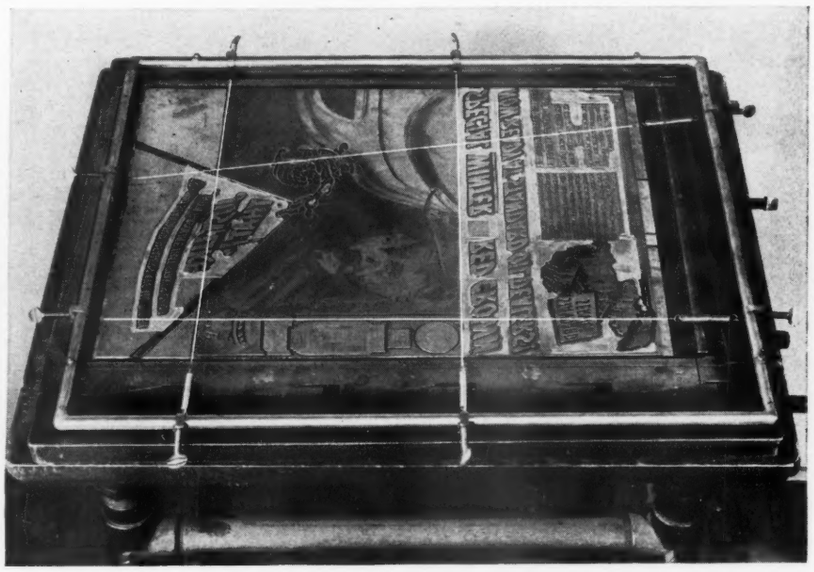
The Register Frame

As the first step in providing a means for locating the color plates in perfect register in the form we built a register rack consisting of a square frame made of ½ in. round cold-rolled steel, welded at the corners. On each of the four side bars were mounted slideable clamps to which were attached fine steel wires.

To keep them taut, a coil spring was attached at one end of each of the register wires. In registering a plate, the register rack is placed over the key plate in the chase, located by means of sharpened pins in the register frame which seat themselves in the trimming groove marks in the chase. The crossed wires are moved and fastened in place by thumb screws so that they intersect directly over the register marks.

In the event no register marks appear on the plate it is necessary to locate three or four points common and distinguishable in both plates. After the wires are set properly to intersect over these common points, or register marks, the form is molded, and then the color plate is locked up in the same manner, it being necessary only to adjust the color plate so that the common points or register marks exactly coincide with the wires as set on the key plate.

If this work has been done carefully and the mats have been trimmed accurately, the plates should be in fairly close register sideways, but in most cases it will still be found necessary to do some adjusting on the press. It has been our practice and we believe the practice is general, to do this adjusting by packing the plate clips with strips of cardboard. Sometimes this accomplishes the desired result without much difficulty, but it often develops that the necessary adjustment is out of the range of packing. We believe that would be particularly true on high-speed presses. Anything placed between the clip and the bevel of the plate is an invitation to disaster. To eliminate this condition, we devised a means of accomplishing the desired result quickly and easily and in any degree necessary without danger of losing a plate on the run.



View of Williams register frame by means of which r.o.p. stereo color plates (one color and black) are pre-registered before molding the mat. The intersecting wires constitute the register points. In use, the frame is set upon the chase so that pins in the frame will set down in the trimming grooves regularly milled in the chase itself. By observing the picture closely, the shanks of these pins can be seen projecting from the top of the register frame. By loosening the wing nuts to which the wires are attached, the wires may be shifted easily to the registration marks.

View of newspaper stereo color plate beveling machine for obtaining side register in plates constructed by Mr. Williams from discarded material. Mr. Williams describes the machine thus: "It is merely a hand-power plate beveler which can be and is also used for double-plate matching."

Stereo Color Plate Side Register Beveler

This device is an assembly of discarded material we had in the plant and was built at no cost except the labor which was done by myself in our own shop. It is similar in theory to a device already on the market, but we believe the application is new in its use for color register. It is merely a hand-power plate beveler, which can and is also used for double-plate matching.

The color plate side register beveler consists of a previously discarded tail cutter cylinder, a sheet of 1/16 in. steel, an old gear, a piece of pipe and a few pieces of angle iron for legs, and a beveling knife.

The old tail cutter cylinder is 1/8 in. smaller diameter than our cylinder, so a sheet of 1/16 in. steel was placed over about half the cylinder and fastened in place. An old gear was placed on the shaft of the cylinder. On the gear was mounted a knife block and a handle.

(Continued on Page 46)

**Mechanical Superintendent, Springfield (Ill.) State Register.*

"DAYCO ROLLERS PUT AN EXTRA DAY'S PRESS PRODUCTION IN OUR WORK WEEK"

● "On winter mornings we no longer lose an hour or more of press time limbering up rollers," says a well-known printer. "Since we installed Dayco Rollers, our presses are ready to go to work as soon as the shop opens. Cold doesn't harden Dayco Rollers—it doesn't shrink them—it doesn't put them out of adjustment. The time we save with Daycos in cold weather often amounts to an extra day's press production per week—and that means a lot of money to us."

You bet it means a lot of money! Figure it out for yourself. And on top of that, you don't need summer and winter rollers with Daycos. It makes no difference to Dayco Rollers whether the pressroom thermometer goes down into the thirties or up into the hundreds. They retain the same consistency, tack, and diameter under all atmospheric conditions.

The patented, exclusive construction of Dayco Rollers makes them different from all others. They distribute ink better. They don't absorb oil or moisture. They don't blister, run down, crumble, crack, or pull apart. They're tough and tenacious. All Daycos ask is to be kept clean and they will stand up for millions and millions of impressions. They pay for themselves over and over again through extra production and cost savings.

DAYCO
"STAYPUT ROLLERS"
Especially built for Newspapers are distributed by
GEO. H. MORRILL COMPANY
Division General Printing Ink Company.

Remember, there is only one genuine patented renewable surface type roller—only one durable Dayco. Insist upon the genuine. Write us today for the Dayco catalog.

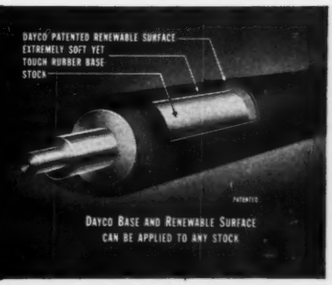
●

THE DAYTON RUBBER MFG. CO.
DAYTON, OHIO

The Originators and Pioneers of Synthetic Rubber Printing and Lithographic Rollers

Dayco Rollers

D


DAYCO PATENTED RENEWABLE SURFACE
EXTREMELY SOFT YET TOUGH RUBBER BASE STOCK
DAYCO BASE AND RENEWABLE SURFACE CAN BE APPLIED TO ANY STOCK

Weather

Doesn't bother Tampa (Fla.) *Tribune* employees — Production benefits of air conditioning — Appraisal of three-year operation

By CLIFFORD ALVES*

INCREASED production, improved health and efficiency of workers and a reduction in maintenance costs have resulted from the use of an air conditioning system in the plant of the Tampa (Fla.) *Morning Tribune*. Air conditioning was installed when the paper moved into its new plant in June, 1935, and accurate records kept since then show its benefits, some of which were not anticipated when the installation was made.

It has speeded composing room production about 12%. It has brought about a saving of 7% in the use of pressroom ink, has reduced interruptions in presswork and materially increased the morale and efficiency of mechanical department personnel.

Tampa weather is of a high humidity, long periods of high temperature in salt-laden atmosphere and a subtropical climate that are wearing on both machinery and workers. These were important factors to be overcome.

When the *Tribune* management decided to air condition its new plant equipment manufacturers had no experience with and little data on installations in newspaper mechanical departments.

Unit Type Conditioner Chosen

After considerable study by all concerned the unit type of conditioner was chosen to provide separate blowers, cooling and heating coils for each department of the plant instead of one large air-washer with a large blower in constant operation.

The unit selection was made to fit newspaper plant requirements in which different departments have different hours and the load varies over the entire plant.

This permits economical operation of smaller units to air condition business, news and advertising offices in the daytime and mechanical departments at night.

Maximum and Minimum Temperatures

The *Tribune* equipment was designed to maintain a 12 deg. difference between outside and inside temperature, but on warmest days with outside temperature ranging from 90 to 95 deg., plant temperature is maintained between 78 and 80 deg. with a relative humidity of about 45 to 50%.

This is the maximum comfort temperature for men performing mechanical work and produces less fatigue, less nervousness and an all-around improvement in health and efficiency.

Layoffs because of illness have been sharply reduced, and greater comfort, improved morale and a better general feeling of the personnel is reflected in increased production.

Before air conditioning was installed workers were virtually exhausted at the end of a long Florida summer. Their vitality was low, and their production did not measure up to their ability. The change with air conditioning has been remarkable.

Production and Maintenance Benefits

Because natural humidity was cut in half, maintenance costs have been reduced through a decrease in rust. Less humidity in a salt climate means less rust and less sticky salt gum in the composing machines which formerly were major problems of production. Salt moisture in small working parts of machines caused such difficulties as matrices failing to release from the magazines, sticking of keys and letter transpositions.

Air conditioning in the pressroom tends to keep down flying ink and static. Records here show a saving of 7% to 8% in ink.

The *Tribune* prints the Tampa Telephone Directory twice a year on a machine-finished paper on its comic press. This job was a nightmare until air conditioning provided a constant temperature and humidity.

The pressroom and the paper storage room are both air conditioned. We have as a result of the air conditioning equipment failed to notice any effect on paper because we keep only a two-day supply in the building. The humidity is high the year around which offers good paper operating conditions for the presses.

We have lowered the temperature in the stereotype room to about 82 deg. with the installation of a new Kemp pot with a well insulated hood.

The composing room presented two problems in air conditioning due to the internal load needed and a tendency toward hot and cold spots. These were solved by redesigning two ducts which now give a comfortable, even temperature.

The composing room is free from fumes, gases and odors. This is taken care of by the installation of hoods over all metal pots—Linotypes, Ludlows, Elrods and Monotype material-making machines. These hoods are 36 in. diam., about 5 ft. above the pots, and are connected with a main duct which runs completely around the room, taking the outlets from all the hoods which are connected with a small suction fan at the main outlet to pull all the poisonous gases and fumes out of the building. The suction fan is small enough that it does not affect the temperature control of the various metal pots. The same plan is carried out on the stereotype department's metal pots.

The *Tribune* plant is always an attraction to visiting publishers, business managers, mechanical superintendents and others interested in newspaper production. These executives are always welcome, and the *Tribune* management has issued a standing invitation to them to inspect the installation while in Tampa.

*Composing Room Superintendent, Tampa (Fla.) *Tribune*.

For Materials Handling

Seventy-seven thousand square feet of land has been purchased for the erection of a modern building to house the General Electric Company's Chicago headquarters, it was announced by W. O. Batchelder, commercial vice president of the company.

An expenditure of approximately $2,500,000 is involved in the project. The site occupies the block bounded by South Canal, South Clinton, West Cabrini and West Arthington Streets.

Work will soon be started on the building which will provide space for the General Electric sales offices, warehouse and service shop; the General Electric Supply Corporation; R. Cooper, Jr., Inc.; and other associated interests.

ATF's New Baby is doing fine!

ALL the care of fond parents is being lavished on ATF's new press now in production. Every feature pressmen said they wanted,* every detail that will enable you as owner to turn out work more profitably is being incorporated. The result will be a valuable addition, without conflict, to the present Kelly line . . . and mark a new era in the graphic arts. You will be invited to see it in the near future at your local ATF Branch.

*In ATF's Ideal Press Contest, September 15 to October 24, 1938

Watch for the press the pressmen OKayed!

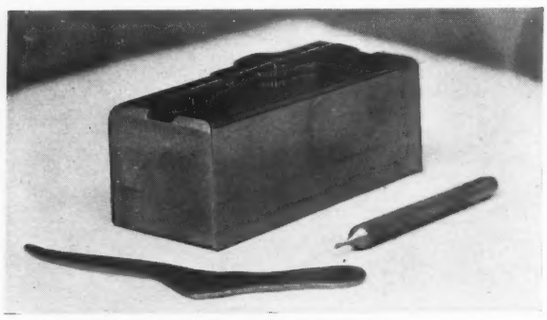
AMERICAN TYPE FOUNDERS

200 Elmora Avenue, Elizabeth, N. J. • *Branches in Principal Cities*

Keyboard Cam Repair Block

ROBERT B. CASWELL, line-casting machinist, with the North Adams (Mass.) *Transcript*, has devised a block for repairing keyboard cams on Linotypes and Intertypes. While a little work is required in "whittling out" the block, its convenience to the machinist is evident inasmuch as through its use he can restore a worn or damaged cam and yoke to its former new and serviceable condition with minimum effort.

The block as fashioned by Mr. Caswell has a groove approx. 0.0468 in. deep milled in the top surface for the reception of the cam yoke while repairs are being made. The groove is deep enough so that when a cam yoke is deposited in it, the under surface of the cam wheel rests upon the top surface of the block. The cam wheel then can be rotated on its journal until the cam stop rivet is positioned directly above a diagonally drilled hole in the block, at which time the stop rivet may be punched out previous to inserting and riveting in a new one. To avoid crushing down the rim of the cam wheel while the stop pin is being riveted, a flat finger approx. 0.052 in. thick, with a forked end may be inserted in the slot between the cam rims so that the forked end of the finger will straddle the rivet.



View of Caswell line-casting machine keyboard cam repair block. By its use, keyboard cams can be restored to first-class condition without damaging any of the cam parts. At the front of the block are shown a finger and a pin punch. The finger (which may be made with a forked end) is approx. 0.052 in. thick for insertion in the slot between the cam wheel walls to prevent bending in a wall while a new stop rivet is being applied. The pin punch is of suitable diameter (0.052 in. or less) to permit punching out old cam wheel stop rivets, journal pins or old-style bearing post hinge pins.

By referring to the accompanying diagram, the location of the cam wheel stop rivet and the cam journal pin holes are so placed in relation to the groove in the top of the block that when a cam and yoke have been placed in the slot it is an easy matter to register the cam rivet and the journal pin holes over the holes in the block. The holes (No. 35 twist drill) are to be countersunk slightly to facilitate punching out old pins. For old-style Intertype keyboard cams fitted with supporting posts, the slot in the top of the block may be widened as shown in the diagram from 11/32 in. to 7/16 in., for driving out the yoke bearing pin.

When a cam wheel stop rivet is to be piened, the wheel itself may be rotated through a small sector of a circle to provide a solid base for the riveting operation. Likewise, when a journal pin is to be riveted, the yoke may be shifted slightly to provide a solid bearing surface. Mr. Caswell states the block may be scribed for register marks to insure both cam wheel and yoke being in proper position to drive out yoke bearing, journal pin or cam wheel stop rivet.

The block shown in the diagram in reduced size is 1½ in. sq. by 4 in. long and was made from cold rolled steel.

Top and end view diagrams showing dimensions and construction of line-casting machine keyboard cam repair block, designed by Robert B. Caswell, line-casting machinist, North Adams (Mass.) Transcript.

The block is 1½ in. square and 4 in. long. It is made of cold rolled steel. Considering the purpose for which it is designed, the block provides a solid and substantial means for repairing keyboard cams in first class manner without damage to the cam parts.

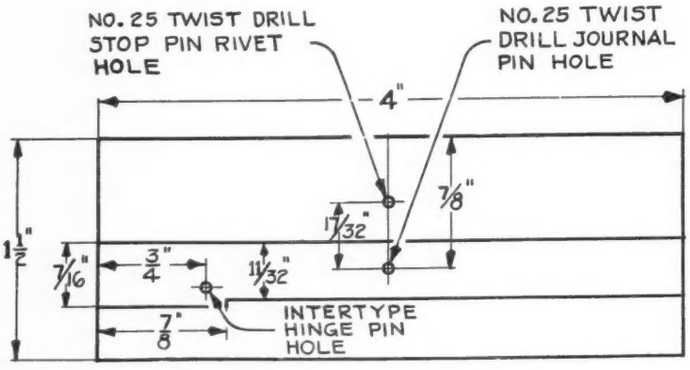
Mr. Caswell suggests notching the block on two lower edges so the block may be fastened in a bench vise while repair work is being done on keyboard cams.

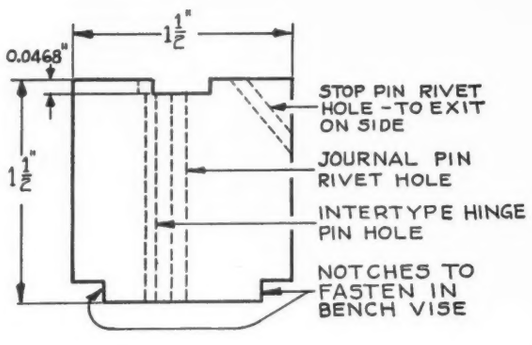
Let's Talk Shop

Talking shop used to be done over the brass rail—now it's graduated. It's taken on a definite, planned and well ordered status—it's gotten away from shifty footwork, raucous noises and foaming schooner. A great deal of it is done in the editorial columns of *Printing* EQUIPMENT *Engineer*. Last month we presented several articles by production and mechanical executives who passed on to you their observations and experiences related to their activities in printing production. In turn, the editor invites you to jot down with pencil on proof paper (if you like) something you think will be of interest to our readers. Then drop it in the mail for Mac Sinclair, Editor.

Good Managers Plan Ahead

In addition to being recognized because of their technical ability, most production and mechanical executives like to be recognized as good managers. Many printing plant executives now are planning to attend the Graphic Arts Exposition to be held in New York, September 25 to October 7.




1 1/2"
0.0468"
1 1/2"
STOP PIN RIVET HOLE - TO EXIT ON SIDE
JOURNAL PIN RIVET HOLE
INTERTYPE HINGE PIN HOLE
NOTCHES TO FASTEN IN BENCH VISE

"Functioning with Clocklike Precision"

SAYS MEREDITH PUBLISHING CO. OF NEW GENERAL ELECTRIC PRESS DRIVES AND CONTROL

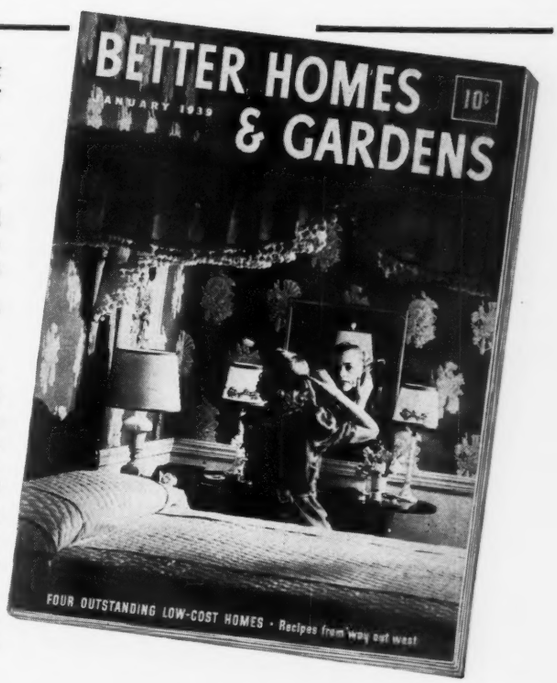
IN recent months the publishers of *Better Homes & Gardens* have brought out a bigger magazine—bigger by about one fourth than the previous issues.

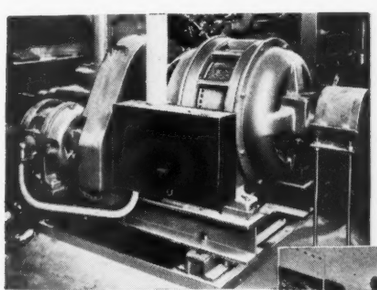
This called for increased printing capacity—new and high-speed magazine presses with new press drives and control.

Appreciating the importance of a correct press-drive and control system in assuring both high-quality and high-speed presswork, Director of Production L. E. Smith reports:

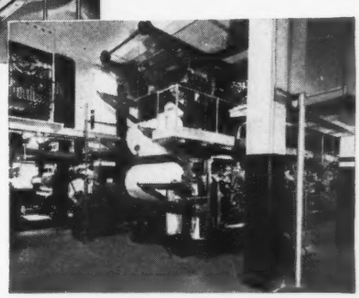
"You will be interested to know that it is functioning with clocklike precision.

"Speed of operation and reliability of press drives and controls are two very important features of our printing equipment, because the magazine must be published on time. In addition to our satisfaction with the operation of the equipment, we appreciate the assistance of the corps of electrical experts who are at our command to help us solve whatever problems may come up, with our expanding business."





One of two a-c drives installed to complete the program for enlarging the pressroom facilities of "Better Homes & Gardens." These drives are compact, sturdy, efficient, and reliable



A section of the Meredith Publishing Co. pressroom, showing full-automatic G-E controller at left. Press rated 15,000 impressions per hour

Whatever your press requirements—newspaper, magazine, gravure, job—for any printing-machine drive and control or for electrical requirements for a complete printing plant, General Electric will provide electrical information, and can furnish complete electrical equipment and service. Get in touch with the nearest General Electric office, or write to General Electric Company, Schenectady, N. Y.

•

GENERAL ELECTRIC

011-437H

Circle the numbers on the coupon indicating the literature or information you want. Supply your name, title, department, firm name and address—we do the rest. Manufacturer or Supplier will send you information or literature about equipment or supplies advertised in this issue.

COMPOSING ROOM

1 QUOINS—"Two Challenge Hi-Speed Quoins actually do the work of from five to eight ordinary quoins. Cannot slip, gives square lock-up, and prevents work-ups. Steel, cadmium plated. Send for reduced prices."

2 MAT-TRAFFIC LIGHT—"The Mat-Traffic light shows the operator, at a glance, whether all the matrices he has been using have cleared his distributor box and bars." Featured by Intertype.

3 TYPE FACE—"Because many unnecessary operations are dispensed with in Ludlow operation, a large volume of display composition can be produced with surprising rapidity."

4 ELECTRIC MOTORS—For line-composing machines—"Enjoy reduced maintenance and production costs, trouble-free operation by using the Cushman offset motor."

5 LINOGRAPH—Model 52 Linograph "has cradle for only two magazines, fast magazine action, more slugs per hour, fast mat circulation, more for your investment."

6 KEY MIXING—"Cuts costs, saves time. Set mixed matter at speed of straight matter. Change from one face to another with only a split-second pause. Another important advantage, exclusive on Linotype."

7 MAGAZINES — "For Linotype machines. Lighter, sturdily built. New Montgomery & Bacon catalog shows many parts and repairs on which the printer can save money."

8 CUT CEMENT—"Provides absolutely level cut mounting and helps importantly to reproduce the best possible illustration. Booth Zinc Cut Cement is most economical, and saves time in mounting cuts."

9 VERTICAL MITERER—"Without previous cutting to length, the Rouse Vertical Rotary Miterer cuts 1,000 miters per hour direct from strip material." Complete description sent.

10 NUMBERING MACHINES—"Rotary press numbering machines feature speed locking time . . . allow finer adjustment and insure better work with Wetter Numbering Machine.

11 METAL POT—"No furnace, no pigging, no cold feeding, no hot molds. Monomelt system provides constant supply of uniformly, pre-heated metal. Steps up production."

12 PARTS—and service for Linotypes and Intertypes. "Complete rebuilding and modernization plan of the Linotype Parts Co."

13 SAW-TRIMMER—"C&G Saw Trimmers, built by Milwaukee, have exclusive features worthy of your investigation."

14 PROOF PRESS—"The 325A Vandercook power proof press affords economies that deserve the serious consideration of every newspaper production executive."

STEREOTYPE DEPARTMENT

15 MATS—"Burgess Chrome Mats have laboratory controlled production. Improved printing with economy assured."

16 CASTERS—Hammond features their two models. "Provide faster, more accurate casting, continuous metal supply for casting either type-high or shell." Specifications and descriptions of these machines.

17 DRY MATS—"A better looking paper breeds better feeling all around. Certified Dry Mats will bring out the halftones much nearer clarity of original print."

18 NEW AUTOFORMER—"Saves 8 to 10% on dry-mat wastage. . . . Eliminates rerolls because of defective mat casting levels. Sta-Hi Autoformer produces uniform printing levels.

19 WOOD MATS—"Graphic Craftsmen demand mats that can be counted on to turn out a top notch job. Wood mats shrink more evenly and scorch more rapidly."

20 GUMMED PACKING FELT—Samples and further details sent on Eastern Newspaper Supply's "Flecto."

21 STEREOTYPE EQUIPMENT—"Lake Erie Directomat improves register, saves type, eliminates stretch."

22 SCORCHER—"Model MMM Form-O-Scorch provides direct heat, has thermostat, temperature control, pilot light and meter, and many other features."

23 GUMMED PACKING FELT—"Only APS Packing Felts have Glutex. . . . This adhesive will not slip, skid, curl or crack."

24 ROTARY SHAVER — "Monomelt Plane-O-Plate is compact, sturdy, accurate, efficient and economical."

PRESSROOM

25 LUBRICATION — "No forgotten bearings . . . no excessive feed to spoil work or waste oil. Bijur lubrication provides correct oil film to each bearing automatically."

class of printing which the Printing Office

26 OFFSET PRESS—"Built by engineers who know offset, standardization brings the Harris offset press into today's modern plant." New litho chemicals also featured.

27 NEW PRESS—"built along lines indicated by thousands of press men by ATF coming soon. Will be a valuable addition without conflict to present Kelly line."

28 ROLLERS—Composition, Rubber or Vulcanized Oil. Sam'l Bingham's Son Mfg. Co. "combines skill, experience and progressiveness to meet the demands of printers."

29 INK—Howard Flint Ink Company will send color selector to those interested.

30 BEARINGS—"Modern newspaper presses now in operation demonstrate the advantages of Timken bearings on plate and impression cylinders and other moving parts."

31 GOSS MULTI-COLOR PRESS—"turns out 38,000 four-color comics per hour." New Goss press is equipped with anti-friction bearings and specially designed for fast, efficient operation."

32 ROLLERS—"Dayco Rollers distribute ink better, don't blister, run down, crumble, crack, or pull apart. Pay for themselves in extra production and cost savings."

33 1939 MIEHLE AUTOMATIC UNIT "with stream feeding will give you precision printing . . . accuracy at high speeds . . . increases production and lowers maintenance charges."

34 INKS—International Printing Ink discusses new line of washout bag inks, suggestions for getting better results in printing white on black stock, IPI ink specialties. Improved gloss inks for offset are now available.

35 SAMPLES of scientifically prepared Treated Jute Tympan will be sent. Mention size wanted.

36 ROLLER-COATING MACHINES —"Accuracy of coating is assured when applied with the Ideal Surfacing Machine designed expressly for the range of roller sizes you employ."

37 PRESS BLANKETS—"Cylinder Packings save money and promote better presswork. Vulcan line includes felt and non-felt blankets, E.D. blankets, draw sheets, cork and laminated underpackings."

38 WOOD AUTOPASTER — "gives full-speed splices 98.61 times out of 100." Wood Newspaper Machinery Corporation will send printed matter on this machine.

39 GENERAL ELECTRIC—"will provide electrical information on any printing machine drive and control or for electrical requirements for a complete printing plant."

40 FIVE COLOR PRESS—"Cottrell presses give you advantage of printing all five colors in one operation." Available, detailed information about Cottrell four and five color presses.

41 INKS—"Zephyr blacks, made by Sinclair and Valentine, cost no more than ordinary inks . . . speed production . . . invaluable on rush jobs."

MISCELLANEOUS

42 INFORMATION—regarding space regulations, floor diagrams and rates for the National Graphic Arts Exposition, which will be held in New York from September 25th to October 7th, 1939.

43 NEW FLUORESCENT LAMP—"Gives a cool blue-white light, low maintenance costs . . . eliminates shadow and eye fatigue . . . gives more light per watt of energy consumed."

44 GATHERING CABINETS — Descriptive circular and further information on solving your gathering problems efficiently and economically by Low equipment.

45 ZINC—"Zomo Zinc and A-Z Alloy Backote save the engraver time and insure better work. No more fuss, muss, danger or delay."

46 METAL QUALITY CONTROL—Imperial's "plus plan" eliminates costly recasts and production losses . . . controls metal quality by adding scientifically controlled amounts of tin and antimony for dross.

47 MOTORS—"Kimble Motors built specially for printing presses and other printing machines." Information will be sent.

This coupon must be filled out completely in order to secure the literature or information you request. Circle only those bulletins you particularly want. This service is *only* for production and mechanical executives.

For Production and Mechanical Executives Only.

PRINTING EQUIPMENT ENGINEER **February**

Without obligation please have the manufacturers send me literature or information circled below. (These numbers correspond to numbers on descriptive paragraphs).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
41 42 43 44 45 46 47

PRINT YOUR NAME AND ADDRESS

NAME.....TITLE.....DEPT.....

FIRM NAME.....

STREET.....CITY.....STATE.....

Callahan Visits Craftsmen

Public Printer's Report

PRODUCTION and mechanical executives generally are interested in production operation of the United States Government Printing Office. For this reason the very fine account describing the installation of a cost accounting and production control system in the big plant which is included in Public Printer Giegengack's Annual Report will be of particular interest.

The reason for operating the Government Printing Office by means of a substantial cost accounting and production control system, apparently, is the the same as would exist in private enterprise throughout the printing industry, inasmuch as Mr. Giegengack states the Office was being compared with private printing concerns. The important thing in the discussion on the introduction of the new system, and which justifies installation of it, is mentioned by the Public Printer as follows: " . . . since printing styles, methods and products are changing constantly, an adequate system was necessary in order to reveal functional changes and reflect the relative value of such changes."

As a result of the installation the scale of prices under which the Government Printing Office billed its work was completely revised and the charges now reflect the cost of the actual type and style of the work ordered by the departments. There is no spreading of loss resulting from one department's work over another department's work. In order to use to the best advantage the information developed by the new system the Public Printer appointed a production control committee to carry on a continuing study of operation cost reduction and production improvement. He is highly pleased with the accomplishments to date as deliveries are being speeded up and unit costs are being reduced.

As a result of the installation of the new system, many complaints were made by the departments apparently because the prices were higher under the new scale on a few of the smaller jobs but overlooked the larger jobs on which prices were much lower. Under date of December 23, 1937, the President ordered a survey of the Government Printing Office by a special inspection engineer to determine whether the prices had been raised by the Government Printing Office and whether the work could be done in competitive shops for lower price. The purpose of the survey was unknown to the Office employees. Among other things, the inspector stated:

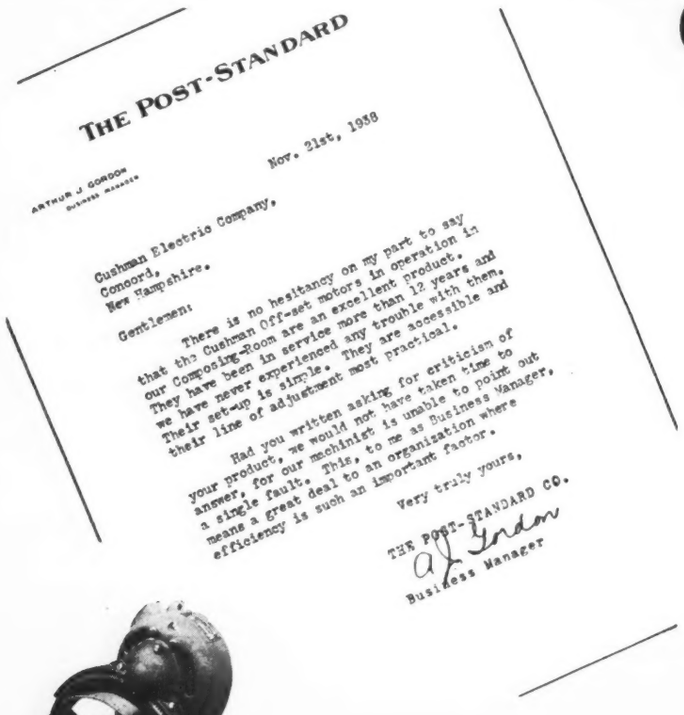
> The anticipated over-all results of the operation of the new schedule of prices are identical with the corresponding results of the superseded schedule in that the total charges collected from customer departments and agencies will be just sufficient to meet all of the expenses incurred in the operation of the Government Printing Office.
>
> While it is possible that upon isolated items of printing outside union shops might consistently be able to quote prices lower than charges made by the Government Printing Office, upon other items the charges made by the Government Printing Office are lower than outside union shops could be expected to quote.
>
> The diversion from the Government Printing Office to outside union shops of any class of printing which the Printing Office has heretofore done would be expected to cause increased costs, and therefore charges, upon work not diverted due to costs arising from fixed overhead that must be charged against the volume of work actually produced.

A detailed statement respecting the volume of production for each of the departments in the Government Printing Office is presented. Several improvements in production operation are noted. One of these is the installation and use of an electric drying machine in the Presswork Division to expedite the delivery of embossed envelopes and letterheads, the wet work passing directly through the drier from the press.

"The first year's operation of rubber-plate equipment," states the report, "has shown very interesting developments, one of the most valuable of which has been the reconditioning of a Harris envelope press for rubber plates exclusively . . . This office recently ran on this press an envelope job consisting of a large corner plate, signature and state line (three plates in all) with 126,000 impressions from one set of plates. These plates were made in 30 minutes and were worn very little upon completion of the job."

A rather complete report is made of the Division of Tests and Technical Control. Among other things, it is stated that progress in improving the quality of the rollers manufactured has been made possible by experimental work with chemical compounds such as glycerine subsittutes. As a partial substitution for glycerine, sorbitol is one of the most recent chemicals adopted. Sorbitol is a hexahydric alcohol which, it is stated, is a very effective hygroscopic agent. It is less susceptible to changes in atmospheric conditions and at high atmospheric humidities takes on less moisture than glycerine. It dries out slower than glycerine and has a stabilizing effect on moisture content of rollers.

(*Continued on Page 38*)


THE POST-STANDARD

ARTHUR J. GORDON
Business Manager

Nov. 21st, 1938

Cushman Electric Company,
Concord,
New Hampshire.

Gentlemen:

There is no hesitancy on my part to say that the Cushman Off-set motors in operation in our Composing-Room are an excellent product. They have been in service more than 12 years and we have never experienced any trouble with them. Their set-up is simple. They are accessible and their line of adjustment most practical.

Had you written asking for criticism of your product, we would not have taken time to answer, for our machinist is unable to point out a single fault. This, to me as Business Manager, means a great deal to an organization where efficiency is such an important factor.

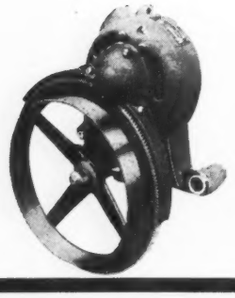
Very truly yours,

THE POST-STANDARD CO.
A. J. Gordon
Business Manager

CUSHMAN MOTORS GIVE 12 YEARS SERVICE

states the *POST-STANDARD* of *SYRACUSE, N. Y.* "They are an excellent product . . . our machinist is unable to point out a single fault. We have never had any trouble."

Experience and *Time* have proven that Cushman offset motors can stand the strain of driving your line-composing machines at their maximum capacities with much lower operating costs and increased efficiency. Why not try this fine motor in your plant? Send for a trial motor today. Investigate Cushman!



CUSHMAN ELECTRIC CO.
69 South Main Street **Concord, N. H.**
Western Agents: Shaw Machine & Tool Co., 1151 Temple St., Los Angeles, Calif.

Callahan Visits Craftsmen

John M. Callahan, President of The International Association of Printing House Craftsmen, has been busy installing officers of various Clubs.

The first installation was at the Columbus Club. The following week he installed newly-elected officers at Dayton, Cleveland and Indianapolis. Previous to that round of trips, Callahan visited the Chicago Club. Arrangements already have been made for a visit, in March, to three of the Canadian Clubs, namely: Montreal, Ottawa and Toronto.

Human Eye

(Continued from Page 4)

most important contribution to research since the invention of the printing press." Coupled with this is the talking book which will enable us to read a book with out ears by means of another machine. Reading will be speeded up if your ears register words faster than your eyes. Or your eyes may be rested while you hear the book. Or both the eye and hearing may be used, the two devices being coupled mechanically. Efforts are being made to teach people to read faster and better. It is said that the average person reads no better than a sixth grade child. Wasted effort is to be curbed and more ground covered. One effort has resulted in an increase in reading speed of about 15% in a group of adults. Obviously, that means more prospects for the products of the Graphic Arts. It should also mean much in the field of production in printing.

Any means that may be found to widen the scope of education will aid the Graphic Arts. It is said that book publishers view with alarm the introduction of the hearing book and microphotography. This seems likely to be a distorted view, for given the time and means to appease the voracious appetite for reading either for education or amusement, and having that appetite whetted by the ability to read more in a given time with greater ease, there is a great possibility that more work will be done in the field of printing than has hitherto been thought possible.

All of these findings applied to industry will make for the greater education of our people. Through knowing how our organs act and react to our environment, we shall know how to take care of them. And through keeping conditions right for one set of organs, the beneficial influence will be carried over to others.

Furthermore, in an industry like the Graphic Arts, where so much time, money, and energy is spent on the education of every employe no matter how skilled, it behooves management and the employe to reduce the mortality of all the elements used in the employ of that skill. Surely eyesight is one of the most important of those elements.

An Executive Feast

Production and mechanical executives ought to look forward with much anticipation to attendance at the Fifth Graphic Arts Exposition which will be held in New York from September 25 to October 7. There is so much to be seen at this time because other attractions will be held currently—the World's Fair and various trade group conventions, among which are the Craftsmen's, U.T.A., I.T.C.A., and those of several other Graphic Arts organizations.

The Publisher Just Smiled and Chatted

There was a time when the stereo foreman was jittery when the big boss visited his department, but now his manner showed more plainly than words that he is pleased.

Stereo foreman thanks the change to Certifieds and remarks to himself how a better looking paper breeds better feeling all around.

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION

9 Rockefeller Plaza, Dept. M, New York, N. Y.

Certified DRY MATS

Ayer Directory Shows Newspaper Increase

NEWSPAPER mechanical and production executives will be interested in the "state of their industry" as revealed in the following brief discussion respecting the new Directory of Newspapers and Periodicals recently published for the 71st time by N. W. Ayer & Son, Philadelphia.

The increase of 68 in the total number of daily, weekly and semi-weekly newspapers published in the United States in 1938 as compared with the previous year was accounted for entirely in the weekly field, as the Directory shows a loss both in daily and semi-weekly newspapers. The total number of English and foreign language dailies in 1938 is listed at 2056, a decrease of 29 under the year before; weeklies, 10,728, an increase of 99, and semi-weeklies, 357, a decrease of 2. The number of foreign language dailies increased from 126 to 127, and the number of tri-weekly papers rose from 38 to 54, according to the Directory.

Fatalities in the evening field exceeded those in the morning field, the Directory shows. A total of 1583 evening papers were listed as being published in 1938, or 22 less than the year before, and a total of 444 morning papers, or 10 less than the year before. On the other hand, the total number of papers falling in the "all-day" classification increased from 25 to 29. There was also an increase of six in the number of Sunday editions of daily papers, the total for 1938 being reported at 593.

While the aggregate net paid circulation of the dailies in the United States dropped 620,900 to an estimated total of 40,679,100 during the year, the figure for 1938 is higher than at any time since 1932 (with the exception of 1937), Directory editors estimate. An interesting point brought out by the Directory is that although both evening and morning papers lost numerically in the past year, estimated net paid circulation of the morning papers increased 325,200 to a total of 15,925,200, while that of the evening papers dropped 946,100 to a total of 24,753,900.

A ten-year comparison by the editors discloses that since 1929 there has been a decrease of 108 in the number of English language dailies published in the United States, while the aggregate circulation of all dailies in 1938 is estimated to have been 3,430,994 less than in 1929. A study of the ten-year tabulation shows that circulation reached a high of 45,106,245 in 1930, then fell off consistently each year until it reached a low of 36,540,000 in 1934. The total number of daily and semi-weekly newspapers showed a steady decline from 1929 to 1933, and has shown increases and decreases alternately in the even and odd years following. Compared with 1929, the total number of dailies and weeklies combined has diminished 585.

There was an increase of 465 in the grand total of all publications in the United States and Possessions, Canada and the West Indies, in comparison to 1937, bringing the figure to 21,223 which is the highest it has been since 1932. The new Directory lists 720 magazines and periodicals of general interest, as compared to 659 in 1937, an increase of 61.

Report

(*Continued from Page 36*)

Bookbinding research conducted in the Division of Tests and Technical Control is discussed. Research on a number of bookbinding problems was continued in cooperation with the Employing Bookbinders of America and the Book Manufacturers' Institute of America under the Research Associate Plan.

Contrary to the general impression that the Government is greatly expanding its publication work, the Public Printer's report shows that the Government spent $204,661 less at the Government Printing Office for this work during the fiscal year 1938 than it did during the prior fiscal year, the figures for 1938 being $17,959,316 as compared with $18,163,977 for 1937. This decrease resulted in there being 185 less employees on the rolls of the Office as of June 30, 1938, than there were on June 30, 1937, the respective figures being 5,409 as compared with 5,594.

The Public Printer mentions the new warehouse which was completed last year. Equipment has been provided for quick and efficient handling of stock materials. The new warehouse and its functions were described in the June issue of *Printing* EQUIPMENT *Engineer*.

An important part of the Public Printer's Report is the plan to facilitate the distribution and reduce the cost of producing instructive governmental publications.

Now In Machinery Sales Dept.

Walter Miller, formerly Office Manager of the New York Branch, is transferred to the Machinery Sales Department of American Type Founders' General Office at Elizabeth, N. J.

Will Conduct Exposition

National Graphic Arts Expositions, Inc., has taken office space in Room 537, Grand Central Palace at 480 Lexington Ave., New York, N. Y. Fred W. Hoch is Exposition Manager and Secretary; Hon. A. E. Giegengack is President; Ernest F. Eilert, First Vice President; Thos. R. Jones, Second Vice President; Harvey H. Weber, Third Vice President, and Joseph F. Herberger, Treasurer.

The complete Board of Directors is as follows: Hon. A. E. Giegengack, chairman; Raymond F. Baylis, Neal Dow Becker, Harvey D. Best, Sol M. Cantor, George H. Cornelius, Ernest F. Eilert, Harvey Glover, Nathan Goldmann, George K. Hebb, Joseph F. Herberger, Fred W. Hoch, Dennis Hoynes, Thomas R. Jones, Clark R. Long, George T. Lord, E. J. Mordaunt, Don H. Taylor, John M. Tuttle, J. W. Valiant, Charles C. Walden, Jr., Harvey H. Weber, James S. Wiley, C. H. Wilhelm.

Graphic Arts associations scheduled to meet in New York during the period of the Exposition, which will be held at the Grand Central Palace, September 25 to October 7, are as follows: International Association of Printing House Craftsmen, United Typothetae of America, National Printing Equipment Association, International Printers Supply Salesmen's Guild, Advertising Typographers Association of America, Printers National Association, International Trade Composition Association, Book Manufacturers' Institute, Direct Mail Advertising Association, Graphic Arts Trade Associations Executives, Young Executives of the Graphic Arts.

Newsprint That's News!

This is title of booklet, 11 in. by 14¼ in. issued by Price Brothers & Co., Ltd. In the booklet is a description of the newsprint manufactured by the Minton Vacuum Drier Process. Color reproductions from the *Christian Science Monitor*, weekly magazine section are presented. *P-Double-E File No. 3P.*

Monotype Bell and Monotype Granjon

Monotype Bell and Monotype Granjon have been announced by the Lanston Monotype Machine Company.

Monotype Bell, states manufacturer of the face for which matrices are now being made, is an open letter, inclined to roundness. It has a delicate appearance and a certain crispness that reflect the influence of French copperplate engravings. Additional Roman and Italic capitals are furnished with each point size. Bell is reproduced by permission of The Monotype Corporation, Ltd., London.

THIS IS THE 10 POINT SIZE OF MONOTYPE BELL, NOW BEING *Made For Monotype Machine Type*-setting in 8, 9, 10, 11, 12 and 14 point. Roman, Italics and Small Caps are combined in the same keyboard arrangement up to 12 point. Roman and Italic of 14 point are run separately. Reproduced by permission of The Monotype Corporation Ltd., London.

Monotype Granjon is based on the types of Garamond, but the design is not in any sense a revival or copy of any of Garamond's letters, says maker. A number of the Italic letters have been modified in width, fitting and kerning in the Monotype version of this face. Granjon is reproduced by permission of the Mergenthaler Linotype Company.

P-Double-E File No. 1G5.

THIS IS THE 10 POINT SIZE OF MONOTYPE GRANJON, NOW BEING *Made For Monotype Machine Typesetting in 6, 8, 9, 10, 11 and 12 pt.* Roman, *Italics* and SMALL CAPS are combined in the same keyboard arrangement and adapted for Monotype Machine Typesetting with permission of the Mergenthaler Linotype Company.

Tingue Elected Treasurer

At the annual meeting of the Board of Directors of Tingue, Brown & Co., William M. Tingue, son of William J. Tingue, Chairman of the Board and founder, was elected treasurer of the company.

Other officers of the company were re-elected and are as follows: William J. Tingue, chairman of the board; John W. Foster, president; Michael J. Doyle, vice president; Emil L. Gerlach, secretary; assistant vice presidents Robert H. Dunham, Harold P. Payne and Gilbert G. Sanborn; Albert W. Putnam, assistant treasurer, and D. V. Groves, assistant secretary.

William M. Tingue, newly elected treasurer of Tingue, Brown & Co.

Answering The Call For

MATS WITH GREATER UNIFORMITY

Wood Dry Mats are dependable . . . that's why they're popular wherever graphic craftsmen demand mats that may be counted on to turn out a top notch job. Ask us for a sample lot.

WOOD DRY MATS

Always Uniform

WOOD FLONG CORPORATION

HOOSICK FALLS
NEW YORK

ZINK CUT CEMENT PRICES in the United States: 75c per largetube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots. Stand-A-Lone Holders 2 for 25c, per doz. $1.00.

Mechanical Executives

like Booth's Zink Cut Cement because it is easy to use. For mounting all kinds of cuts on wood or metal base. It is the most economical cut mounting means not only from the standpoint of material used, but also in the important item of time required to mount cuts.

Booth's Zink Cut Cement provides absolutely level cut mounting and helps importantly to reproduce the best possible illustration because of intimate contact of cut with base over the entire cut area.

These facts are attested to by a substantial increase in the number of production and mechanical executive users.

Distributors:

Sears, Ltd.
Toronto, Montreal, Winnipeg, Vancouver, Canada

Junger & Junger
Gothenburg, Sweden

E. A. BOOTH RUBBER COMPANY

364 ROCKEFELLER BUILDING · CLEVELAND, OHIO

Patents

Recently Granted by U. S. Patent Office

Bookbinding:

2,142,817. BINDING FOR BOOKS. Max Gudis, Philadelphia, Pa., assignor by mesne assignments, to Spiral Binding Co., Inc., New York, N. Y., a corporation of New York. Application May 2, 1935, Serial No. 19,381. 4 Claims. (Cl. 281—25.)

1. A book consisting of a plurality of leaves; a continuous wire binding for the leaves consisting of a plurality of substantially parallel loops each terminating in a straight portion which is in a plane substantially at right angles to the plane of the loop; a backer carried by the binding and consisting of a strip having a plurality of loop receiving slots formed therein, the slots also serving to define and form tongues on the backer which contact with the straight portions; and a channeled sheathing plate carried by the backer.

Composing Machines:

2,142,337. MATRIX COMPOSING AND LINE CASTING MACHINE. Paul Sckrabei, Berlin-Lubars, Germany, assignor to Mergenthaler Linotype Company, Brooklyn, N. Y., a company of New York. Application November 11, 1937, Serial No. 174,037. In Germany May 15, 1937. 10 Claims. (Cl. 199—50.)

1. A typographical composing and slug casting machine comprising jaws adapted to be moved inwards to clamp a composed line of matrices and spacebands, justifying mechanism to justify the line, and means distinct from the spacebands operated by the justifying mechanism whereby the jaws are positively separated to a prearranged extent if the line between them is of not less than a prearranged length, the means being arranged to remain inoperative if the composed line is of less than the prearranged length.

2,144,431. TYPOGRAPHICAL COMPOSING MACHINE. Luther E. Morrison, New York, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application October 20, 1937, Serial No. 170,007. 40 Claims. (Cl. 199—19.)

1. A typographical composing machine comprising, in combination, a font of typographical elements divided into a plurality of groups, the elements of one group bearing consonants without vowels and those of the remaining groups bearing the same consonants with vowels, the vowels being the same in the individual groups but differing as between the groups, a channeled magazine arranged wherein the typographical elements are stored according to group, a keyboard comprising a group of finger keys common to all the element groups, and means whereby said group of finger keys may be operatively connected to the magazine channels containing any selected one of the element groups.

Feeding, Folding, Delivery:

2,140,528. WEB SUPPLY MECHANISM FOR PRINTING MACHINES. Albert J. Horton, White Plains, N. Y., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application December 27, 1935, Serial No. 56,302. 18 Claims. (Cl. 242—58.)

17. In a web supply mechanism, a web roll supporting reel, a support for rotatably supporting the reel, the reel being adapted to support a freely rotatable web roll, a cam rotatable with the roll on the reel, a movable member carried by the reel, an electric circuit closing switch adapted to be actuated by the member, means to support the switch adjacent the reel and in the path of movement of the member, and connections between the cam and the member to cause actuation of the switch by the cam.

2,141,137. WEB SUPPLY MECHANISM FOR PRINTING MACHINES. Albert J. Horton, White Plains, N. Y., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application September 15, 1936, Serial No. 100,858. 15 Claims. (Cl. 242—58.)

1. In a web roll changing mechanism, a movable web deflecting member, means to restrain the member, electrically operable means to release the restraining means, a switch in circuit with the electrically operable means, a manually operable member for simultaneously exerting a pull on the web deflecting member and actuating the switch, and resilient means connecting the manually operable means and the web deflecting member.

2,141,963. COLLAPSIBLE DELIVERY FOR PRINTING PRESSES. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application December 5, 1933, Serial No. 700,967. Renewed January 12, 1938. 21 Claims. (Cl. 192—127.)

1. In a delivery for folded products, the combination with a delivery fan and a movable frame below the fan having delivery belts carried thereby, of a pair of folding rolls, means for moving the frame down to space the belts from the fan if a choke of products occurs at the folding rolls, and means controlled by one of the folding rolls for operating the frame moving means.

2,142,011. SHEET DELIVERY APPARATUS FOR FOLDING MACHINES. Georg Spiess, Leipzig, Germany. Application December 2, 1936, Serial No. 113,900. In Germany December 3, 1935. 4 Claims. (Cl. 271—64.)

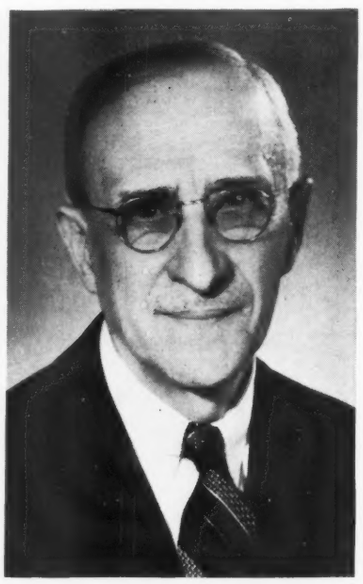
1. Sheet delivery apparatus for transverse feeding tables of folding machines, the folding machine including means for delivering sheets in one direction to the transverse feeding table, rolls on the table for moving the sheets transversely of the direction of delivery, means for driving the rolls, means on the table movable in the delivery direction, the last means normally being maintained in an inoperative position below the plane of the top surface of the rolls, means for raising the last means to an operative position above the plane of the top surface of the rolls, and means for driving the raised means to deliver sheets from the table in a direction corresponding substantially to the direction of delivery.

2,142,536. TWO-SHEET DETECTOR. August C. Smith, Pittsburgh, Pa., assignor to Miller Printing Machinery Company, Pittsburgh, Pa., a corporation of Pennsylvania. Application April 24, 1937, Serial No. 138,807. 6 Claims. (Cl. 271—56.)

1. In a sheet-feeding apparatus, the combination with means for releasably seizing a sheet from a pile and moving it to a point laterally thereof, of a relatively fixed abutment adjacent the path of the sheet, a presser foot adapted to cooperate with the abutment and effective therewith to grip and restrain a plurality of sheets against feeding movement should they be seized and moved simultaneously, and means operating during the passage of each sheet past the presser foot for moving the foot into a gripping position relative to the abutment such that the movement of a plurality of sheets is arrested.

Loewenberg Retires

Leo Loewenberg, who has been composing room superintendent of the Chicago *Tribune* for 46 years, retires this month from active duty. At the 37th semi-annual convention of the *Tribune* advertising staff on January 5, C. M. Campbell, *Tribune* advertising manager, presided as toastmaster and presented Mr. Loewenberg a watch, a gift from the advertising department in appreciation for his long services and cooperation. Editor and Publisher Robert R. McCormick spoke to the advertising group assembled about the success of the *Tribune* as a newspaper is due to the coordinated efforts of all departments. Mr. Loewenberg is well known to a considerable number of mechanical executives attending the A.N.P.A. Mechanical Conferences from time to time.



2,143,049. SHEET FEEDING MECHANISM. Frank R. Belluche, Racine, Wis. Application September 16, 1936, Serial No. 101,094. 18 Claims. (Cl. 271—53.)

1. In a machine for performing work upon sheet material wherein the sheets as they are presented to the machine are picked up by grippers, means for insuring proper presentation of the sheets to the grippers comprising a front guide with which the leading edges of the sheets engage, the front guide being movable, means for actuating the front guide so that it has first a motion in the direction of the sheet advance and then a period of rest in the predetermined registering position, and means operable on the front guide to define its registering position.

2,143,247. PRINTED ARTICLE AND METHOD OF MAKING THE SAME. David J. Seaman and Howard H. Metcalf, Battle Creek, Mich., assignors by direct and mesne assignments to Seaman-Metcalf Incorporated, a corporation of Michigan. Application March 8, 1935, Serial No. 9,920. 5 Claims. (Cl. 270—5.)

1. A method of associating webs in newspaper presses and the like comprising the steps of feeding a plurality of relatively wide webs into the press, printing upon the webs to provide printed areas bordered by longitudinally extending unprinted areas, feeding a previously printed narrow web into the press having adhesive charact ristics upon one side thereof, the narrow and wide webs being coextensive along their associated lengths, the narrow web in width approximating the width of one of the unprinted areas, and uniting the narrow web to one of the other webs along the unprinted area at press speed.

2,143,514. SHEET FEED MECHANISM FOR PRINTING PRESSES. Walter G. Hackbarth, Milwaukee, Wis., assignor to C. B. Cottrell & Sons Company, Westerly, R. I., a corporation of Delaware. Application February 23, 1938, Serial No. 191,881. 12 Claims. (Cl. 271—53.)

1. In a sheet feed rotary printing press, a sheet feed carrier rotating continuously in one direction at variable speeds, and means for causing it to slow down to take a sheet, to speed up and to then slow down to transfer the sheet.

2,144,037. SHEET-FEEDING MECHANISM FOR PLATEN PRINTING PRESSES. Frank Sydney Thompson, Manchester, England, assignor to T. C. Thompson & Sons, Limited, Manchester, England. Application May 21, 1937, Serial No. 143,889. In Great Britain May 23, 1936. 4 Claims. (Cl. 101—287.)

1. In a platen printing press of the type described, a sheet-feeding mechanism comprising in combination suckers for picking up a sheet of paper, means for moving the suckers from a position to engage a sheet adjacent the outer edge of the platen to a position adjacent the inner edge thereof, said means including a pivotally mounted guideway, a bar slidably mounted in the guideway, and means for reciprocating the bar in the guideway comprising a crank and a connecting rod pivotally secured at one end to the crank and at the other end to the bar, the two pivots of the connecting rod being aligned with the crank in the two extreme positions of the suckers.

Miscellaneous:

2,140,595. BELT CONVEYER FOR NEWSPAPERS AND LIKE ARTICLES. Harold Herbert Rapley, Bedford, England, assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware. Application September 25, 1936, Serial No. 102,496. In Great Britain October 1, 1935. 2 Claims. (Cl. 198—165.)

1. In a newspaper conveyer, in combination, associated horizontal and vertical belt conveyer sections for carrying the newspapers in overlapped relationship, the latter conveyer section including inner and outer belts between which the newspapers are frictionally held, driving rollers for the belts including a corner roller associated with the inner belts for engaging the inner surface of the newspapers as the same pass around the corner between the conveyer sections, and auxiliary belts arranged between the outer belts and crossing the angle between the conveyer sections for engaging the outer surface of the newspapers as the same pass over the corner roller, the auxiliary belts being driven solely by frictional engagement with the outer surface of the newspapers and acting to yieldingly hold the same in engagement with the corner roller.

2,142,666. METHOD OF AND MEANS FOR PREVENTING OFFSET. Edmund H. Buey, Stamford, Conn., assignor to Atlas Powder Company, Wilmington, Del., a corporation of Delaware. Application May 15, 1936, Serial No. 79,836. 5 Claims. (Cl. 101—416.)

1. The method of preventing offset which comprises providing a rolling surface having minute depressions therein, moving the surface through a substantially transparent solution comprising a cellulose derivate and an evaporable solvent, removing the solution from the surface while allowing minute globules thereof to remain in the depressions, exposing the globules to the atmosphere for a time sufficient to evaporate a portion of the solvent and bring the globules into a tacky condition passing a printed sheet into contact with the surface, and simultaneously transferring the globules to the sheet during the contact, the consistency and spacing of the globules being such that they remain discrete on the sheet.

Presses:

2,140,834. PRINTING APPARATUS. Marshall E. Gazette, Boston, Mass. Application September 7, 1937, Serial No. 162,667. 9 Claims. (Cl. 101—228.)

1. Apparatus for printing sheet material, comprising a pair of rolls rotating in opposite directions and coacting

Sheet Music

that keeps photo-engravers happy

Many engravers report that they can save at least five minutes on every Backote Sheet. Backote means better work, too, because its acid-resistant metallic coating is applied at the mill with scientific evenness over the entire surface of the sheet—no bumps, ridges or holes in the backs of completed cuts. No more fuss, muss, danger or delay.

You can order Zomo Electric Zinc or A-Z Alloy, plain or BACKOTED, from leading metal suppliers in the United States, Canada, and England.

ZOMO ELECTRIC BACKOTE
A-Z ELECTRIC ALLOY BACKOTE

One of the precision machines used in the manufacture of Hi-Speed Quoins.

Prices Reduced

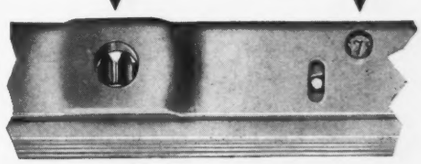
22% ★ Greatly increased sales and volume production have lowered manufacturing costs, so that . . . without any sacrifice of quality . . . Challenge now quotes new, 22% lower prices on

CHALLENGE Hi-Speed Quoins

Saving 70% to 80% on lock-up time, insuring accurate register and requiring no reglets, these steel, cadmium-plated quoins are self-locking, cannot slip, give square lock-up and prevent work-ups. Two Challenge Hi-Speed Quoins actually do the work of from 5 to 8 ordinary quoins.

Operates with one turn of key

Indicator shows exact register position



★ Write today for complete list of reduced prices on all six sizes of Challenge Hi-Speed Quoins!

THE CHALLENGE MACHINERY CO.
GRAND HAVEN, MICHIGAN
CHICAGO, 17 E. Hubbard St. ◆ 200 Hudson St., NEW YORK
Agents for Great Britain — Funditor Limited, London, E. C. 1

for printing on sheet material fed between the rolls; pulling means beyond the rolls for maintaining the sheet material continuously under tension, and for feed of the sheet material to the rolls; clamping means in advance of the rolls for intermittently holding stationary the entire sheet of material between the clamp and the pulling means; and means, including an element rotating in unison with one of the rolls, for disengaging the holding means each time a particular part of one of the rolls arrives at printing position.

2,140,950. INKING MECHANISM FOR PRINTING ROLLS. James L. Blackley, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a corporation of Michigan. Application February 6, 1937, Serial No. 124,475. 4 Claims. (Cl. 101—365.)

1. In combination; an ink fountain, a fountain roll, a series of scraper blade sections, and screws for adjusting the scraper blade sections relative to the fountain roll; a bar slidably mounted above each blade section and between the fountain roll and screws; and a rod rotatably mounted adjacent each slidable bar and having a threaded end engaging with such bar, whereby the bars may be moved into engagement with the inner edge of the related blade section to force the section to cut off the supply of ink from that portion of the fountain roll to the ink distributing means.

2,140,986. PRINTING PRESS. Lester V. Dearing, Milwaukee, Wis., assignor to Automatic Unit Corporation, Milwaukee, Wis., a corporation of Wisconsin. Application August 16, 1938, Serial No. 225,129. 14 Claims. (Cl. 101—282.)

1. In a printing press having a reciprocating bed with constant speed throughout an intermediate portion of the cycle in each direction, the combination with a pair of gear-segments positively driven in opposite directions and a positive gear connection between one of the segments and the bed during each intermediate movement of the bed comprising a single rack carried by the bed and a pinion constantly in mesh therewith, of a reciprocating rack and gear-segment transmission to the pinion for driving the pinion and consequently the bed through the decelerating, reversing, and accelerating movements, the segments being related to provide alternate positive drives throughout the entire cycle.

2,141,607. INKING MECHANISM FOR PRINTING MACHINES. Frederick Lamatsch, Grantwood, N. J., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application December 23, 1936, Serial No. 117,259. 15 Claims. (Cl. 101—350.)

1. In an inking mechanism for a rotary printing machine, a printing member rotatable in either direction, a plurality of inking cylinders, a plurality of form rollers each in contact with the printing member and with one of the plurality of inking cylinders, and another form roller in contact with the printing member and mounted for movement into contact with any one of the inking cylinders.

2,141,961. REEL ROD FOR A PRINTING CYLINDER. Isidor Tornberg, Plainfield, N. J., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application May 18, 1936, Serial No. 80,295. 1 Claim. (Cl. 242—74.)

A reel rod formed of two segments, the adjacent surfaces of the segments at one side being slanted away from each other across the rod to form an opening for the insertion of a tool to permit them to be separated, and a series of springs surrounding it and yieldingly holding the parts against separation.

2,141,978. ROTARY PRINTING OR COATING MACHINE. David Greenhill, Watford, England, assignor to The Sun Engraving Company Limited, Watford, England, a British company. Application March 11, 1937, Serial No. 130,410. In Great Britain March 12, 1936. 4 Claims. (Cl. 101—157.)

1. In a rotary intaglio printing machine, in combination, an ink container comprising walls partially enclosing the printing cylinder, a duct communicating with the interior of the ink container, and means for continuously withdrawing air from the ink container through the duct.

2,143,885. INKING DEVICE FOR PRINTING PRESSES. William Kline, Roanoke, Va. Application December 21, 1936, Serial No. 117,067. 24 Claims. (Cl. 101—366.)

1. An ink feeder for a printing press having an inking mechanism that includes a to and fro moving element, the feeder comprising an ink holder with an outlet for ink to the inking means, and mechanism to subject ink in the holder to expelling pressure, including a to and fro moving bar situated to be engaged and actuated by the to and fro moving element, and a horizontal pivot suspending the bar in a substantially vertical position with its lower part in the path of the element.

2,143,886. INKING DEVICE FOR PRINTING PRESSES. William Kline, Roanoke, Va. Application December 21, 1936, Serial No. 117,066. 20 Claims. (Cl. 101—366.)

1. An ink feeder for the inking mechanism of printing presses, comprising an ink holder, with an outlet to deliver ink to the inking mechanism and means to subject ink in the holder to expelling pressure comprising two members, one to impart and the other to receive motion, and a yieldable connection between such members which includes a spring with means to adjust the tension of the spring.

In New Size

The January issue of *The Linotype News* appears in tabloid size, contains 16 pages. Newspaper styling and makeup have been continued in the new size. The center spread of the *News* is made up in regular large size page form.

The change in size of *The Linotype News* was brought about by joining *Shining Lines* and the *News* into one publication so that everybody could have opportunity of reading Thomas Drier's inspirational material. *Shining Lines* as a separate publication has been discontinued. John E. Allen continues as editor of the *News*.

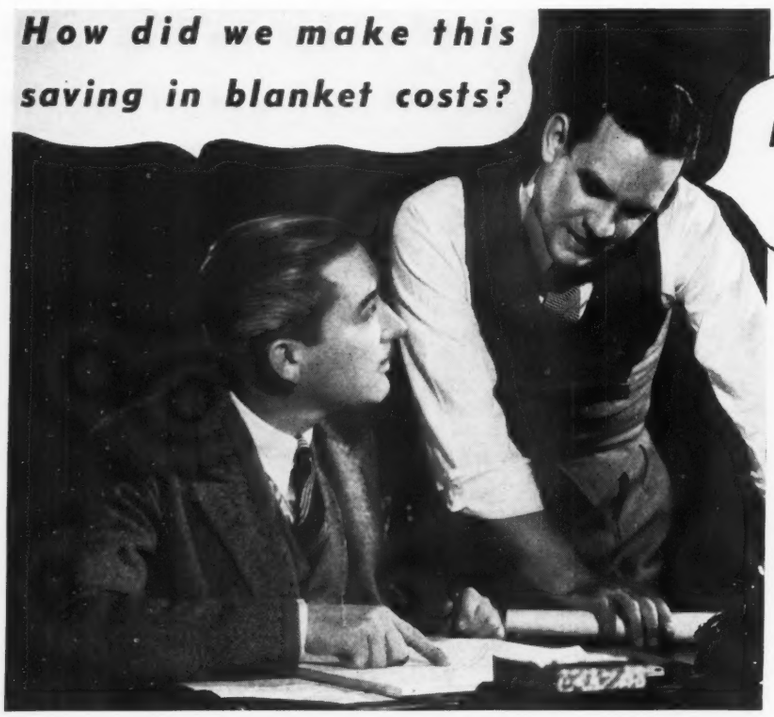
In President J. T. Mackey's announcement explaining the merging of the two publications it is stated: "Reader demand outside the executive list for whom *Shining Lines* was intended originally thus brought about what Editor Drier promptly termed this 'shotgun wedding'."

Linograph Coast Distributor

John S. Thompson has taken over the distributorship of Linograph typesetting machines for the states of California and Nevada.

Mr. Thompson's career has been devoted to the printing industry. For many years he was a member of the I.T.U. and is proud of his Honorable Withdrawal Card, dated September 12, 1903, which was issued to him when he resigned as Linotype instructor and superintendent of the Inland Printer Technical School in order to manufacture the Thompson Typecaster, which he invented. He is author of *The Mechanism of the Linotype*, *Correct Keyboard Fingering* and the *History of Composing Machines*. He has invented and patented a score of improvements in typesetting and typecasting machines and at one time edited the Machine Composition Department of the *Inland Printer*.

How did we make this saving in blanket costs?



By using VULCAN top blankets and underpackings

YES, Vulcan Cylinder Packings do save money, and at the same time promote better presswork, as hundreds of newspaper pressmen will testify. The Vulcan line includes felt and non-felt blankets, E.D. blankets, draw sheets, and both cork and laminated underpackings. Let us cooperate with you in choosing the best combination for *your* requirements. Detailed information and recommendations will be furnished without charge or obligation. Please address Vulcan Proofing Company, First Ave. and 58th St., Brooklyn, New York.

VULCAN PRESS BLANKETS

Sales Representatives in Principal Cities

BURGESS CHROME MATS

BURGESS CHROME MATS

Start the year right by adopting Burgess Chrome Mats.

Improved Printing with Economy Assured.

Write for details.

•

CHROME MATS

A Laboratory Product Made in U. S. A.

•

Burgess Cellulose Co.

Manufacturers and Distributors
Burgess Chrome and Tone-Tex Mats

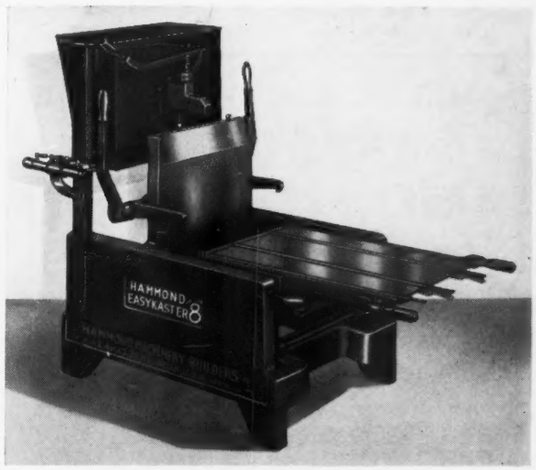
Freeport, Illinois

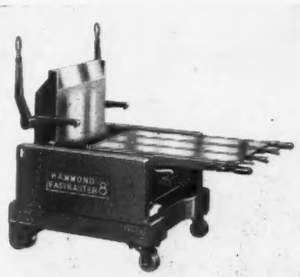
Pacific Coast Representative, RALPH LEBER,
426 Polson Bldg., Seattle, Washington

A358

BURGESS CHROME MATS

BURGESS CHROME MATS





Top
Hammond EasyKaster "8", Model EK8-P with 800 lb. Melting Pot.

Lower left
Hammond EasyKaster "8", Model EK8 without melting pot and with casters.

The Model EK8-P, (shown above) is the combination of an 800 pound, valve controlled melting pot with the fastest and most accurate automatic locking full page flat caster made. This unusual combination provides the plant now without adequate melting facilities, with faster and more accurate casting and continuous metal supply for casting either type-high or shell.

The Model EK8 (shown at lower left) with its faster and more accurate casting, is the ideal machine for the plant equipped with a large metal furnace.

Specifications and description of the 8 exclusive features, including the Scientific Clamping Pressure Distribution, is yours for the asking.

Hammond Machinery Builders, Inc.
NEW YORK KALAMAZOO, MICHIGAN CHICAGO

1604 DOUGLAS AVENUE

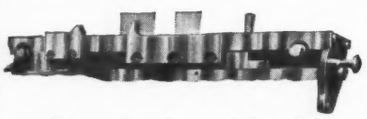
Eastern Sales Office—295 Lafayette St., New York City
Western Sales Office—536 Sansome St., San Francisco

BUILT-FOR-THE-NEWS-LINE

ANNOUNCING

MODEL "52" LINOGRAPH

Has cradle for only TWO magazines—one for news and one for agate—switch from one to another in less than TWO SECONDS.



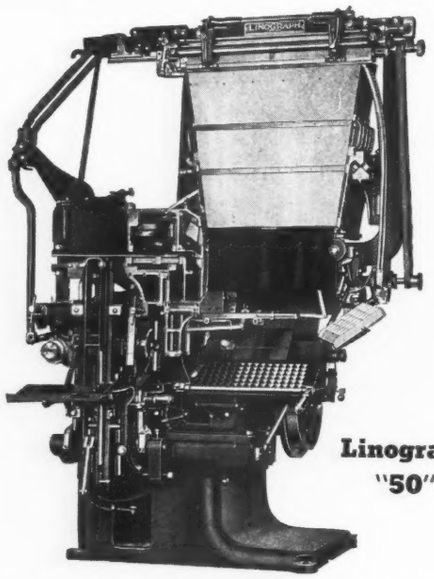
Finger-touch crank for plus or minus odd measures.

FAST KEYBOARD ACTION
FAST MAT CIRCULATION
MORE SLUGS PER HOUR
MORE FOR YOUR INVESTMENT !

Can be converted into five magazine machine in 10 minutes by slipping on the perfectly interchangeable 5-magazine cradle.

SPEEDY • SIMPLE • ECONOMICAL

No special attachments necessary for 4-point column rule or odd measure work. Linographs are built with a finger-touch point setting on left of vise cap—a complete revolution equals one-half pica. Just standard equipment. No extra cost. No extra "gadgets."



Linograph "50"

For display work we offer the model "50" which has the five magazine cradle.

Write TODAY for Complete CATALOG

LINOGRAPH CORPORATION
450 W. Front St., Davenport, Iowa

Gentlemen: Please send us your complete Linograph Catalog. We are particularly interested in ☐ Model "50" ☐ Model "52."

Name.....By.....
(Title)

City.....State.....

Keeping in Touch

BAGGY CLOTHES—Cloth bags for flour and sugar often lead double lives. After they're empty, thrifty housewives use them for dishtowels, lunch cloths, curtains, and even for housedresses. In order to prepare these bags for their many uses, they now can be printed with "washout" inks—inks that may be washed out of the bag when it is empty. Until recently, these inks were generally unsatisfactory; either they would stain the bags or they would wash out too easily, running when water was spilled on them. Now IPI's Products Development Laboratory has perfected a line of washout bag inks that remain fast until *soap* and water are applied to them. And where a pattern is desired, special inks permit the advertising alone to wash out, leaving the design intact.

When the tax collector gets your last penny, we suggest you don a nice flour bag instead of the proverbial barrel. But be sure the bag is printed with IPI's new easy-wash inks.

ADDENDA—Ever since our Expectant Mother Green was ferreted out by THE NEW YORKER, we have been self-conscious about the terrible completeness of the IPI color line. This feeling has been emphasized by the recent discovery in our billings of a "Fun in Bed Yellow" (FUN IN BED is a book!) and an "All Saints Blue." If it's specialties you want, IPI has them.

PRESSROOM TIP—A printer told us that by mixing a little blue and a little silver in with a cover white, he gets much better results in printing white on black stock. With this mixture, one run is sufficient to get a satisfactory impression.

VOGUE—The vogue for gloss printing continues, and IPI's research on gloss ink continues, too. Improved gloss inks for offset are available now; also four-color process gloss inks. The regular IPI Glo-Ray inks are making money for printers who are saving the expense of an overprint varnish with gloss printing. Why not try Glo-Ray? Be sure to mention your paper stock when ordering these gloss inks.

WRITE—If you would like more information on any of these items, please write to us. Remember that "It pays to keep in touch with IPI."

INTERNATIONAL PRINTING INK
DEPT. P.E.F., 75 VARICK STREET, NEW YORK, N.Y.

ipi

Books

Fifth Production Yearbook

EVERY production and mechanical executive should possess or have access to the newly published Fifth Production Yearbook. This year's edition has been completely revised and contains 150 new articles and charts by authorities in the Graphic Arts field. The book contains 560 pages and four out of five pages are illustrated. The book averages 2½ illustrations per page.

It is difficult to describe the book adequately in a short review. However, the main sections are devoted to (1) Art and Photography, (2) Book making and Bookbinding, (3) Engraving and Electrotyping, (4) Paper and Ink, (5) Printing Processes, (6) Production Data, (7) Typography, and (8) a very complete Index.

Innovations consist of "Robot calculators," which are new forms of charts for automatically estimating prices and quantities in printing, engraving, paper, etc.; identification chart of similar type faces for eliminating confusion regarding types resembling one another; 15,168 items on paper included in the Munder Paper Chart.

Photomontage is one of the interesting subjects treated in the book. Examples in black and white and color are presented. Kodachrome is explained technically and by means of diagrams so the reader may have a clear idea of its principles and how it is used. Streamlining letterheads by Prof. Otto F. Ege is an interesting discussion. Salient Points in Photo-Engraving are discussed clearly and plainly by Louis W. Flader. "News-color Hints" by Joseph Cangalosi tells what should be done to prepare r.o.p., magazine and comic section copy and why allowances should be made for porous paper, thin inks, smoke screen, show-through and color register difficulties. Turning the discussion about and to look at it from the standpoint of the mechanical executive, we believe Mr. Cangalosi's discussion is worth while, because it will enable the printing plant executive to recognize faulty appearance of newspaper color and to determine just where the fault may be. Printing On Foil by George Herrick gives the major principles and technique for this sort of work.

Fifth Production Yearbook, published by Colton Press, Inc. Size 8¾ in. by 11¼ in., 560 pages, cloth binding. Color inserts by various processes. Illustrations average 2½ to the page. Price, $5 per copy, cash with order. May be secured through Printing Equipment Engineer.

Knox Plan For Printing Control

While the set of Working Manuals which has been published by Frank M. Knox Company is not intended for use by printers, yet the announcement will be of great interest to production and mechanical executives for the reason that the Manuals are intended to help the designer and buyer of printing design printed matter according to the most advantageous sizes as specified in the Manuals. "Because users, and not printers," states Mr. Knox, "plan almost all advertising and promotional printed matter, consideration is rarely given to many important factors that make for efficient production, and, in consequence, millions of dollars are wasted every year."

This conclusion was responsible for seven years of engineering research in the printing field by Frank M. Knox. As a result of this exhaustive study he developed the Knox Plan for Printing Control.

The basis for the Knox Standards is a set of 68 Standard Unit Sheets, ranging in size from 3⅛ in. by 3⅛ in. to 35 in. by 45 in., all of which can be cut without waste from one or more of the following sheets: 25 by 48, 35 by 45, 28 by 44 and 32 by 44 in.

The Knox Plan also provides the layout man with all the information he needs on blotting papers, bristols, blanks, writing papers, cover stocks, envelopes, window displays, bleed allowances, and other matters.

This information is presented in a set of working manuals. Four of these contain the Unit Sheets and the Dummies and are for the use of the creative staff. The Production Manager receives a manual which permits him to check quickly the work planned by the creative staff, detect errors, and prepare accurate specifications.

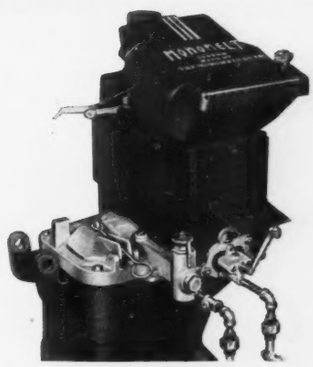
Students Visit Ludlow Factory

Students of Chicago North Park College classes in estimating, under the direction of J. J. Skach, visited the Ludlow Typograph Company plant Wednesday evening, January 4th, and witnessed a demonstration of the Ludlow system of slug composition from hand-set matrices. Douglas C. McMurtrie, Director of Typography for the Ludlow Company, explained to the assembled students the principles of Ludlow job and display composition and the relation between production costs and estimating. Students participated in an estimating contest in which actual copy was set and the operation timed.

3036 Plants Have Boosted Composing-Room Efficiency — with MONOMELT!

7247 Units Now in Active Use Prove the Soundness of Direct Melting!

No stronger endorsement of the Monomelt system could be written than that found in the record showing 7247 units installed in 3036 plants. Many of these represent single unit jobs, many involve complete batteries of machines. Not only has Monomelt replaced outdated metal handling methods with new efficiency and control, but it has stepped up metal quality, made remarkable production savings! Note what users have to say. And don't pass Monomelt by without finding out what it can make for you!



CUT METAL TROUBLES — IMPROVE PRODUCTION

Read What Typical Users Say!

"We get better slugs, much higher production from our machines and a considerable saving over other methods."
G. A. HARSHMAN,
Sharon Herald.

"Average monthly savings—$41.31. Putting it mildly I am very enthusiastic about our Monomelt equipment."
LEWIS J. RAEMON,
Business Mgr.

"We have proven we get better and more type with Monomelts than any other type of feeder and we have tried them all."
GUS RUSSEL,
Trade Composition and Make-up.

"In our printing plant we find the Monomelt indispensable and highly profitable."
WILLIAM FEATHER,
William Feather Co.

Investigate Monomelt Now!

No furnace, no pigging, no cold feeding, no hot molds! Under the Monomelt system there is a constant supply of uniformly, pre-heated metal ready to be fed into the machine pot just as rapidly as the metal is withdrawn for casting. Monomelt steps up production, improves slug quality, reduces down time. Investigate the new streamlined models with their many new features including a protective screen for the operator. Get the facts now and modernize for profit with Monomelt.

MONOMELT CO.
1611 Polk Street N. E. Minneapolis, Minnesota

Sole Selling Agents in Great Britain, Northern Ireland and Eire—Funditor, Ltd., London, E.C. 1

WRITE FOR PRICES AND CATALOG FOLDERS NOW

Equipment

(*Continued from Page 24*)

of circle. One operator, with five cabinets and a table can have within reach as many as eighty 9 in. by 12 in. or forty 12 in. by 18 in. sheets, or similar sizes, and can gather from 4000 to 6000 sheets per hour, the quantity varying with size and weight of paper, the number of sheets per set and speed of operator. There is no tendency to dizziness as operator turns only 18 in. at a time.

When a large volume of gathering is required, a six-seat rotator provides equipment with which 25,000 to 30,000 sheets per hour can be gathered by six operators from the same circle of cabinets. The rotator is a steel frame on which is mounted a revolving circular top with seats for operators. The circular top rides on inverted ball bearing casters. The operators gather and move themselves in unison from cabinet to cabinet.

Cabinets can be arranged around the rotator in groups of two, three or five cabinets, with a table for the gathered sets between each group of cabinets. The sheets in different groups of cabinets can be identical or different sets, each gathered set being placed on its own table.

When gathering a large number of sheets per set or sheets larger than 9 in. by 12 in., the sheets are placed as gathered from each cabinet in a lap tray held in a convenient tilted position on operator's lap by a belt and side straps. Operator transfers the gathered sets from lap tray to table. *P-Double-E File No. 6L.*

Fluorescent Lighting Fixture

To provide local "daylight" illumination for many operations including color matching, the Goodrich Electric Company has designed a new type fluorescent fixture in two sizes to accommodate the 18 in. and 36 in. fluorescent lamps.

To assure the highest possible factor of reflection, the fixture is finished in three coats of permanent porcelain enamel, white inside. Fixtures can be mounted singly or in parallel or linear rows to answer a wide variety of lighting problems. Because the fluorescent lamp operates at much lower temperatures

than ordinary lamps, closer mounting is possible for cool, localized illumination of many jobs. Catalog sheets are available upon request. Address the Goodrich Electric Co. direct or in care of *Printing* EQUIPMENT *Engineer. P-Double-E File No. 1GG.*

Peck With Lake Erie

Lake Erie Engineering Corporation, Buffalo, N. Y., has appointed L. E. Peck as Midwest District Sales Manager. He is located at 1540 East 53rd St., Chicago.

Register

(*Continued from Page 28*)

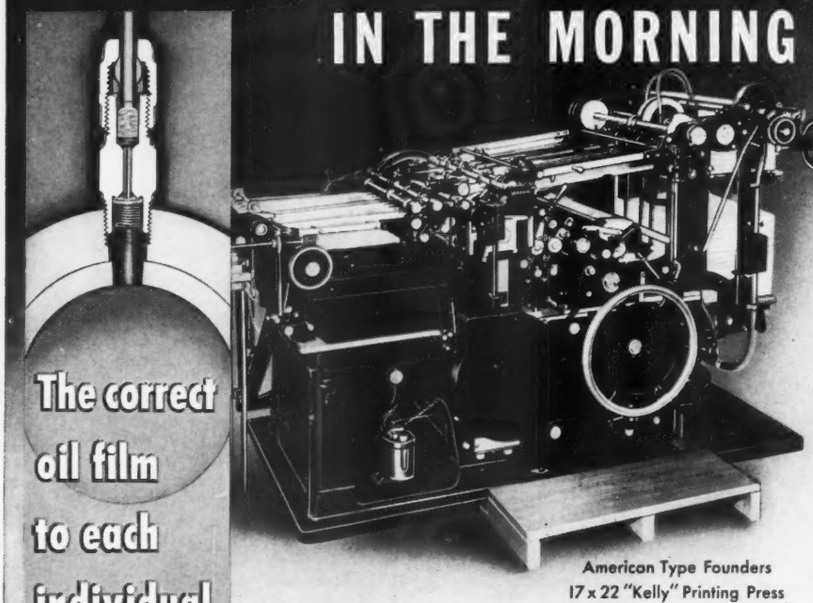
At the top of the cylinder was placed a movable stop or clip operated by a hand wheel. When it is necessary to adjust a plate, it is placed on the cylinder, moved by the hand wheel up to the knife, and a cut is taken on the bevel. A little experience in its use will enable the user to judge the amount of metal to remove for a certain side adjustment.

One thing that troubled us at first, but which later proved to be a distinct advantage, was the fact that there was sufficient spring in the plate that we did not always get a straight cut on the bevel. Sometimes we would cut heavier at the tail of the plate than at the head, and *vice versa*. In color register, this characteristic has proved to be a distinct advantage because it is possible to trim a plate heavier at one end than the other to compensate for any inaccuracy in the trimming of the mats or in the event of the mat shifting in the casting box. In order to get a straight cut, it is necessary only to move the plate up to the knife and pull the knife backwards until the plate straightens itself, after which an even pull throughout the entire length of the plate will be obtained.

We have had color plates that registered at the bottom but were possibly 1/16 off at the top. By using this machine, we were enabled to register these plates quickly and without the use of packing.

One particular instance was a double-page in color. The inside plate registered almost perfect. The outside page color was in at the bottom but away out at the top. Packing was of no use. The red plate had to be moved in, and the black plate could not be packed out because it would have spoiled our double

THE FIRST PRESS TO START IN THE MORNING



American Type Founders
17 x 22 "Kelly" Printing Press

The correct oil film to each individual bearing... automatically

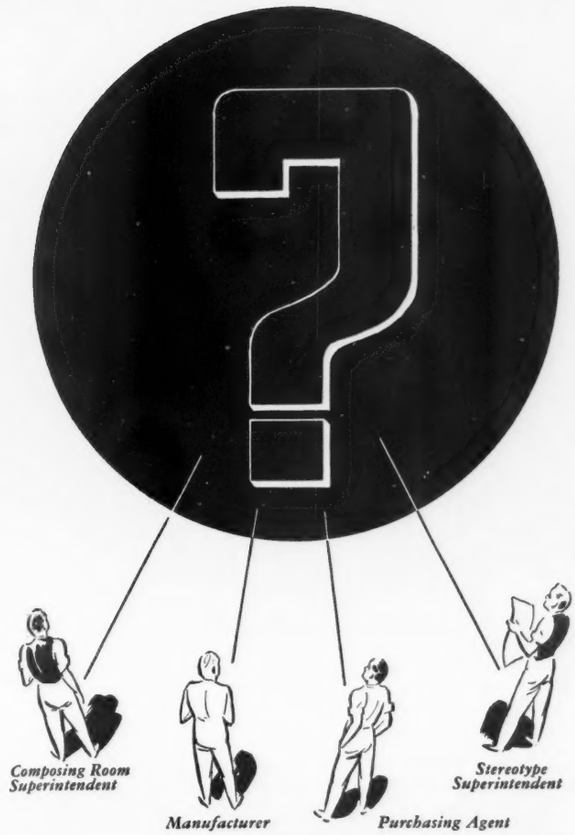
BIJUR

AUTOMATICALLY *Correct* LUBRICATION

● Machines equipped with BIJUR AUTOMATIC LUBRICATING SYSTEMS waste no time! Start your machine . . . automatically the proper oil film is metered to each bearing . . . whatever its type, location, speed, load. No forgotten bearings . . . no excessive feed to spoil work or waste oil. BIJUR . . . the modern aid to maintained accuracy . . . longer machine life . . . quality output . . . uninterrupted production . . . safety . . . reduced costs!

BIJUR LUBRICATING CORPORATION
LONG ISLAND CITY NEW YORK

741



Who takes the Responsibility for Type Metal Performance?

There is no buck-passing of the responsibility for metal in the Imperialized plant. As soon as the first pound of Imperial Metal enters a shop, Imperial Type Metal Company assumes the unconditional responsibility for that metal's performance.

The Imperial Plus Plan makes this possible because it keeps the working supply of metal in ideal condition at all times. Regardless of the mat or type of casting box used, Imperial Metal permits the production of solid plates and sharp faces—the kind your department can be proud of.

Imperial

IMPERIAL TYPE METAL COMPANY

PHILADELPHIA • NEW YORK • LOS ANGELES • CHICAGO

MACHINE REBUILDING AND MODERNIZATION

There is still plenty of Service in that "old Linotype Machine"

It can be put in *better* than original operating condition if full advantage is taken of our *rebuilding* and modernization plan.

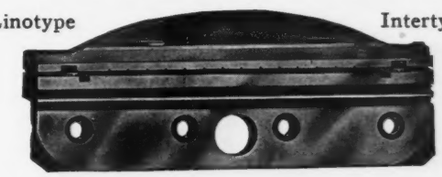
Briefly, we rebuild in our own factory those expensive units which are worn; we supply many *improved* parts that make for smoother, more efficient operation and in addition reduces cost of up-keep; we furnish conventional "STAR" parts to replace those that are worn.

Only thru us can the fullest economy and efficiency be obtained in Linotype and Intertype machine rebuilding.

Further details available on request.

DO YOU KNOW that it takes about a year to finish a "Star" Mold? This is due to the fact that during the many operations involved in the manufacture of this part ample opportunity is allowed for "seasoning." This means less warping when put into service.

Linotype Intertype



TRADE ★ MARK

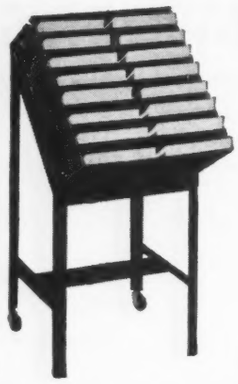
Ace Cord-Rubber Belts (Endless) will outlast any others. For every place on the machine.

LINOTYPE PARTS COMPANY

NEW YORK, N. Y. 203 Lafayette St.

KANSAS CITY, MO. 314 West 10th St.

Chicago 318 West Randolph St.
Minneapolis 503 Fourth Ave. South
Denver 1441 Blake St.



LET US SOLVE YOUR GATHERING PROBLEMS

Is gathering a source of loss or profit in your bindery? Have you the latest improved, accurate, speedy and profitable method of gathering? This company has made an extensive study of gathering costs and methods. As a result we have designed and patented equipment to solve any gathering problem. Right now, at the beginning of the year is a good time for you to check your gathering operations. We will be glad to consult with you on your present methods and show you how you can speed up gathering and make more profit on your jobs through the use of our Gathering Equipment.

Write today. Tell us about your gathering requirements and we will show you how to do it efficiently at less cost.

JOHN M. LOW & COMPANY **227 Madison St., Chicago, Ill.**

match. The lip of the double plate ordinarily would have presented another problem. It was so near starting time we did not have time to recast and rout another page. By removing the plate and twisting it slightly on the beveler and taking a couple of cuts at the head of the plate without touching the bevel at the tail of the plate, we got in register and were ready to roll long before the starter came down. Ordinarily we would have been forced to go to press with the color badly out of register. Another feature of this method of registering color is that if too much of the bevel is taken off by mistake, the plate is not ruined, as the other plate can be shaved to compensate for it, and as the knife is set to shave under the lip of a double plate, it is possible if necessary to undercut the bevel as much as may be necessary.

Both devices have proved valuable to us, and in particular the beveler has been a life-saver for us in several cases.

Conference

(*Continued from Page 17*)

made at the desk so that the compositor may identify them easily.

Typewritten copy should be made of all messy, illegible or poorly prepared copy. The best way of course, is to request stores to send in typewritten copy in small sections together with a master lay-out. Sometimes, however, the stores do not wish to cooperate. For furnishing duplicate copies of advertising copy, the photostat machine is a valuable instrument because it eliminates the possibility of errors being made in typing or copying of lines for display machines. A negative photostat can be used for display machines and the positives can be used for the smaller types.

Pressroom Clinics

General Pressroom

This meeting, which was presided over by Chairman Alexander Kramer, of the Syracuse *Post-Standard*, discussed a variety of involved pressroom technical subjects. F. W. Schnell, R. Hoe & Company representative, functioned as secretary.

On a press, not equipped with reels, and when the press is shut down to change rollers John O'Hare Pressroom foreman of the Binghamton *Press*, stated that the average waste in his plant is 8 papers. In answer to the query: "How can spoils from roll changes be kept at a minimum?" Eugene Ahearn of New York Hearst Production Management, stated that running paper off core waste is 1.2%. It was

"FLECTO"

GUMMED PACKING FELT

Practical knowledge and research have combined, to produce this backing felt which is successfully used on all dry mats. Made in gauges .025, .030 and .035—sheets 18 in. by 24 in. and gauges .040, .045 and .050—sheets 18 in. by 22 in. Cut into strips without charge.

Free samples on request.
Special discounts on quantity orders.

EASTERN NEWSPAPER SUPPLY
9603 Northern Boulevard **Corona, L. I.**

ON ROTARY PRESSES TOO,

Number better with a WETTER

• Save press time with WETTER Rotary Numbering Machines. WETTER features speed locking time and allow finer adjustment. WETTER interchangeability for right angle or parallel operation reduces necessary investment. WETTER accurately turned figures for all size cylinders insure better work.

Tell us your problem and we will show you how to save money and number better with a WETTER.

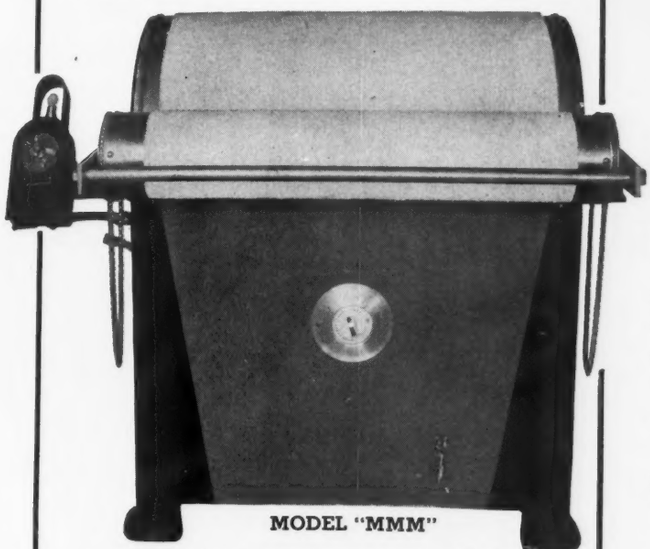
WETTER NUMBERING MACHINE CO.
ATLANTIC AVENUE & LOGAN STREET, BROOKLYN, N. Y.

FORM-O-SCORCH

- DIRECT HEAT
- THERMOSTAT
- TEMPERATURE CONTROL
- ADJUSTABLE COVER TENSION
- PILOT LIGHT & TIMER

$250 WITHOUT TIMER

$275 AS ILLUSTRATED



MODEL "MMM"

AMERICAN PUBLISHERS SUPPLY
Box 131, West Lynn, Mass.

Quicker Deliveries AND MORE PROFIT

Mitering by ordinary methods is time consuming. With the Rouse Vertical Rotary Miterer, 1,000 miters may be cut in an hour---direct from strip material---without previous cutting to length.

Such speed facilitates production and tends to quicker deliveries---and consequently more profit.

There are many features of the Rouse Vertical Rotary Miterer that deserve serious consideration in modern composing room production. Details will be sent at your request.

H. B. ROUSE & COMPANY
2216 North Wayne Avenue, Chicago, Illinois

also mentioned that care must be used in making splices and in not running paper off the core.

On old presses it is advisable to carry more impression on the first impression cylinder and on new presses the impression should be approximately equal.

In answer to the question "What causes static in the pressroom?" Representative Joe Sullivan of the Wright Paper Company stated that there would be static if the pressroom atmosphere is dryer than the paper. As a remedy, he suggested a thin jet of steam to increase moisture in the room.

Pressroom Foreman Roy Strachen of the Elmira *Star Gazette* and *Advertiser*, stated that some cuts can be printed better than others simply because some are better than others. The results it was decided are naturally due to the quality of the engraving, the solid mounting of cuts, and the excellence of the stereotype plates.

Since the element of competition is a desirable factor in newspaper reproduction where more than one unit is involved in like work to produce a similar product, Leon A. Link, Cleveland *Plain Dealer* Production Manager, stated he thought that when at least two presses are being used to print the same edition, each pressman should be given a copy of the paper from the other press—for comparative purposes.

"When press equipment will permit, is it general practice to change the lead of web from first to second impression to improve the printing of national advertisements or large cuts?" it seemed to be the consensus of opinion that changing web leads is bad practice. Reversing leads brings trouble with editorial conditions because of the impossibility of accommodating demands of both advertising and editorial departments in case both departments want the preference at the same time.

Frank Barnecott, Cutler-Hammer representative, discussed at some length the alterations involved in Cutler-Hammer conveyors when making changes in paper web width. His recommendation is that iron rollers should be replaced by using narrower rollers positioned from 2 to 2¼ in. from outside wire to paper stream.

Where uneven delivery results on delivery table, the delivery itself may be caused by bent fan blades or folders. See that all fan blades are in accurate position. The use of soft wire is recommended because it will not break on short runs. In putting on wires, watch the tension.

Pressroom Ink

Pressroom Foreman Edward Knobles of the Syracuse *Journal*, presided as chairman and P. O. Roberts of the William Herrick Ink Company, was named secretary. One of the topics for discussion stated that many pressmen are getting less coverage from ink. The question asked: "Is this loss caused by the general use of more illustrations or is it due to the quality of ink or newsprint used?" This question was answered jointly by discussing another question related to strike-through, show-through, misting, offset and coverage. With respect to coverage, the report of the clinic stated that today advertisers demand jet black printing. A few causes for greater ink consumption are: (1) Light impression with consequent heavier application of ink to secure print, (2) Poor finish on paper, (3) Short runs, (4) Many editions, (5) Type of press, (6) Too dry a paper, (7) Heavy type, (8) Reverse plates and illustrations.

In the discussion on ink misting it was stated that so far as the clinic knew no one has ever been able to put his finger on ink misting. In a certain case, one kind of ink was being used on two presses of the same make but located in different parts of the pressroom. In one case the ink filled the air with a fine black mist, while the other press was absolutely free of the trouble. Presses were operated at same speed, and the same newsprint was used, but the fact remained that in one case the ink misted and in the other it did not.

Pressroom Rollers

David R. Evans, Pressroom Foreman of the Utica *Observer-Dispatch*, presided as chairman of the Pressroom Roller Clinic, while George C. Chalmers, Vulcan Proofing Company, was named secretary of the meeting.

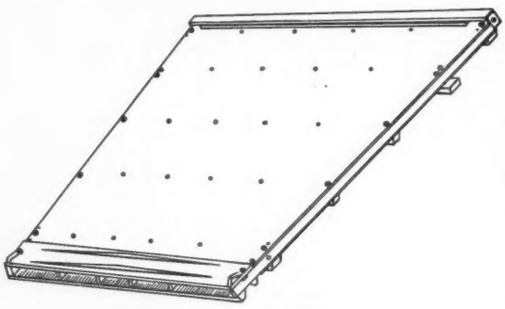
After discussing the materials from which various kinds of inking rollers are made, their function and how rollers function, and so on, the clinic determined upon contact measurements for setting roller against the plate.

It was determined that there is a temptation to set rubber rollers in greater contact against the plate than composition rollers because the danger of melting the roller is not present. If rubber rollers are set too hard against the plate, they will not turn freely on slow motion, will not print clearly on speed and excessive wear is caused on the roller socket bushings.

A medium hard rubber roller is recommended for newspaper presses, one having a 30 durometer test.

The recommended wash for composition

Set Up Your Own P-Double-E Filing System— See Page 12, December Issue



ONLY $95 EACH
$90 EACH IN LOTS OF 6 OR MORE
$25 DOWN—BAL. $10 MONTH

IMPROVED MAGAZINES

Improved design magazine combines best features of other designs—weight saving (only 30 pounds) and extreme ruggedness. Top plate of duralumin and bottom plate of brass. Fits all standard models of Linotypes. Tested on Linotype machine before shipment. Sent on approval basis if desired.

Ask for free 108-page catalog describing other items such as rebuilt steel-rim mold disks. We buy, sell and trade-in typesetting machine parts, accessories and repairs.

Montgomery & Bacon, Towanda, Penna.

rollers consists of 1/3 light oil and 2/3 kerosene. Care should be taken that the surface is not injured by too hard rubbing while washing. Immediately after washing, the rollers should be locked in position on the press and inked up. Air will cause composition rollers to dry out after washing if the roller is not inked.

Washing of rubber rollers is not recommended after installation because they do not tend to collect foreign matter from ink or paper.

When a section of the press is being run without plates, it is recommended that sufficient ink be applied at intervals to lubricate them to prevent them becoming dry or generating heat. Oil or vaseline may be used, but ink is considered best for the purpose, as there is danger of oil working over and lightening printed section.

Rollers should always be unlocked after the edition is off.

One of the interesting bits of technical discussion reported by the chairman of the Roller Clinic to the corollary meeting was in reference to the life of rollers. In the report it is stated: "Rollers are like tires. They travel and give transportation—in the case of rollers they give transportation to ink. On newspaper presses, rollers travel on the average of four miles per roll with much intermittent starting and stopping. Like tires, when rollers become old or worn, their mileage costs increase. They create trouble and work. Hard, uneven and lifeless rollers cause more stereotype make-overs, use more ink and produce an inferior grade of printing. When the question of changing from old to new rollers is being considered it is well to ask yourself: "What business are we in? Printing or preserving?"

Composition rollers should be renewed when the surface becomes cut, pitted or lifeless. It is a common fault of pressmen to leave rollers, especially distributors and feeders, in the press until they begin to crumble and throw chunks. This is a common occurrence with non-meltable rollers.

In answer to the question: "Can rubber rollers be used successfully in open-type sockets on rotary presses?" it was suggested that positive locking sockets be provided. Not recommended as a complete cure for roller jumping but will improve operation considerably.

Pressroom Packing

Pressroom Foreman, Palmer V. Welch of the Schenectady *Union-Star*, presided as chairman and William Grenier of New England Newspaper Supply Company, served as secretary.

The first topic for discussion had to do with

We Invite Inspection

No. 2 Pedestal Model

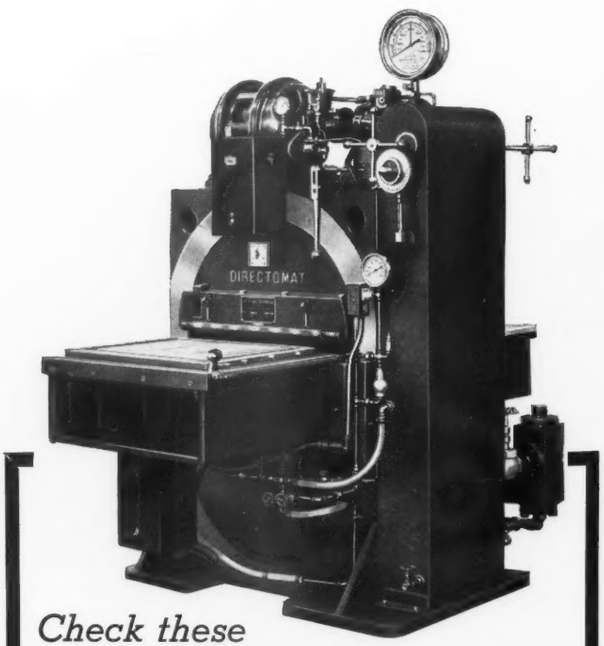
Safe Against Even Careless Operation.

No. 3-A and No. 2 C&G Saw Trimmers will be demonstrated at most of the outstanding mechanical conferences during 1939.

If you wish specific information concerning C&G equipment for your plant anytime before you attend these conferences, write us, and your inquiry will be given prompt attention and descriptive literature forwarded.

C&G Saw Trimmers have exclusive features worthy of your investigation. These features always win in competitive demonstrations.

Milwaukee Saw Trimmer Corp.
610-612 East Clybourn St., Milwaukee, Wis.



Check these
DIRECTOMAT POINTS

1. Twice as fast as Rollers
2. Easy Operation
3. Instant Pressure Control
4. Eliminates Stretch
5. Improves Register
6. Saves Type

LAKE ERIE STEREOTYPE EQUIPMENT CORP.
Kenmore Station BUFFALO, N. Y.

It Sticks!

LIKE TAR TO A PUPPY

SUPERIOR GLUTEX

GUMMED PACKING FELT

Only APS Packing Felts have Science's latest contribution to better stereotyping — GLUTEX. This fine adhesive will not slip or skid and does not crack or curl. It adheres quickly and permanently to the mat.

Write for Samples

AMERICAN PUBLISHERS SUPPLY

BOX 131 - - - W. LYNN, MASS.

Bustles were going out . . .

in 1905. And the Kimble idea was already in . . . of a motor built specially for printing presses and such. How much that idea has meant to printers you can see by comparing the equipment of that day and this . . . and the number and variety of machines equipped with the special Kimble Motor today. KIMBLE ELECTRIC COMPANY, 2011 W. Hastings St., Chicago, Ill.

Kimble MOTORS

Distributed by AMERICAN TYPE FOUNDERS

Branches and Sales Agents in Twenty-Five Cities

the comparative printing results obtainable from a hard cork under blanket with softer felt top or a soft rubber under blanket with a hard felt top blanket.

The answer to this is that on the first half of this question, inasmuch as the propounder of the question asked for printing results obtained from hard cork underpacking with soft felt top, it was assumed he meant a harder cork in combination with a softer felt. There may be conditions in some offices where stereotype machinery is not in the best of condition, or the concern sometimes is "penny wise and pound foolish" by purchasing supplies on a price basis so that it is almost impossible for the stereotyper to deliver to the pressroom a plate that is suitable for a harder blanket. Knowing of the inequality of the plates, the only alternative for the pressman is to use the softer top blanket. The soft rubber packing is always undesirable.

It was decided that a glossy finish on blankets tends to relieve the strain on the sheet between the first and second impression cylinders.

Overpacking on the second impression cylinder such as on the Z type press where there is not much sheet wrap around the cylinder is very desirable. Blankets with smooth glossy finish have less tendency to offset and there is less tendency to slur because the ink does not pile up on the blanket surface.

In answer to the question "Why do blankets deteriorate faster at the tail end rather than at the head end?" it was stated there is more impact on the tail end as it is not pulled as tightly as the head end which gives the effect of a bump causing the blanket to wear out more rapidly than at the other end which is stretched thinner.

Walter T. Hogan of the Long Island *Press* introduced a resolution which was adopted and in which it was stated that the pressmen present at this clinic wished to go on record as being in favor of more frequent press blanket changes for the good of the publisher, the advertiser, and the industry as a whole.

STEREOTYPE CLINICS

STEREOTYPE MAT AND MOLDING

Mechanical Superintendent Charles Frederickson of Westchester County Publishers, conducted the Mat and Molding Clinic. Ray Finzer, Wood Flong Corporation representative, acted as secretary.

This clinic covered a great deal of ground related to a complicated subject.

One of the most interesting topics for discussion was that "Where do buckles develop in mats?" Where buckles occur in dry mats the causes may usually be traced to molding,

TRY IT TODAY

Return This Ad For Sample Sheets. Please Mention Size Wanted.

RIEGEL'S TREATED JUTE

A SCIENTIFICALLY PREPARED TYMPAN

The old reliable. Its tough jute fibers stand up under the longest runs. Stocked in roll widths for every press.

RIEGEL PAPER CORP., 342 MADISON AVE., NEW YORK, N. Y.

drying or casting. Molding causes may be due to too deep a bolster or high cuts, too much cusion in molding combination, mat distortion so that scorchers cannot flatten the mat. With harder molding combinations less distortion will occur. Very few buckles will occur where a uniform tension with a normal amount of heat is kept on the cover of certain makes of scorchers. If mats are held too tightly in casting boxes by the pouring sheet, clips or side gauges, buckles are apt to occur. It is more desirable to dry a mat slowly.

The consensus of opinion of the meeting was that in plate casting the average casting temperature should run between 600 and 625 deg. F. and that each individual plant must find out its best workable temperature.

Regarding the temperatures of dry mats when placed in the casting box there are no known means of recording this temperature.

When molding for Duplex Tubular equipment many executives are using 0.090 in. Masterpiece Creeper; on top of this a 1/16 in. Fiber molding board and on top of this a 1/4 in. cork. It is claimed this method of molding gives proper depth in the bowls of fine type with shallow bolsters which eliminates mat distortion.

Stereotype Metal

Stereotype Foreman, Joseph Smith of the Buffalo Evening *News*, presided as chairman.

In answer to the question "Does drossage loss depend upon the size and capacity of the melting pot?" it was stated that a deep pot with small stereotype metal surface area is more suitable.

In contrast to a similar question which came up at the Stereotype Mat and Molding Clinic, the Stereotype Metal Clinic recommended that the average temperature for casting stereotype plates is between 575 deg. and 625 deg. F. A variation of 20 deg. in temperature does not have an appreciable effect on casting stereotype plates. However, it was asserted that results are dependent upon shop conditions, such as water, temperature, type of casting box, and so on.

When a stereotype plate wears down rapidly on the press, the metal formula should be checked for antimony loss.

General Stereotype Room

At the General Stereotype Clinic presided over by Walter W. Whitby, Buffalo *Courier-Express* Stereotype Foreman, one of the questions which came up for discussion was as follows: "What is the best procedure for handling flat casts made from page mats." The suggested procedure is to insert the mat among damp mat as received from the mill so that it wil absorb sufficient moisture to gain some of its original flexibility, then proceed with casting in the ordinary manner. Better results might be obtainable by type high casting rather than shell casting.

Engraving Clinic

Engraving Room General

Julius J. Klien, Photo-engraving Foreman Buffalo *Evening News*, presided as chairman, and Ray Lambrecht, Bridgeport Engravers Supply Company, acted in the capacity of secretary.

The difference between the old-time dragon's blood and the present synthetic etching powder is that the synthetic powder will melt under 225 deg. as against the 250 deg. temperature melting point of dragon's blood.

It was determined definitely that the personnel and equipment for producing newspaper color work should be entirely separate from the regular engraving department.

Sixty line screen halftone flashing should not be carried any farther than possible. Closingup of the lens to the proper position requires a little more skill than when using the brass stop. Flashing hardens the shadow dot. Operators make negatives in the dark room instead of being made on the camera. Over flashing causes graying of the negative.

It seemed to be the consensus of opinion that a certain amount of art work is desirable in group pictures where there is no contrast. A face should never be retouched, because of the liability of distorting facial features.

One-bite etchings are impractical at all times because they do not give the required depth.

A description of the Gibson Bump Process was introduced which consists of a new method of making a plate with metallic underlay in one piece. It is claimed this process will produce a more consistent reproduction.

It is argued that in newspaper printing and to secure maximum results a half-tone plate should be printed with more pressure on the darker areas than on the lighter areas. In other words, two printing levels are required to produce the true value of the plate.

The Scherer Rolup process was discussed exhustively; claims made are that the process yields a pyramid dot in the high lights with greater depth especially in the middle tones, the depth value being nearly as deep as in the high lights.

Photography Clinics

Photoflash Lamp in Press Photography

C. B. Neblette, of the Rochester Athenaeum and Mechanics Institute, presided at the Photoflash Clinic held Monday afternoon at 2:30 o'clock. He was assisted by Wells Crandall, Head Photographer of the Elmira *Star-Gazette*.

A demonstration was made of a new synchronizer in which all wire connections between the battery case, the lamp and shutter uses electrical contacts within the camera. Other features of the new synchronizer are a bulb ejector and focusing arrangement for

ZEPHYR BLACKS

Timed to the Tempo of the MODERN Pressroom!

Perfected in three grades, they are available for practically any job. But you must try them to fully appreciate their value; it is impossible to adequately describe them. You must see for yourself how they speed production . . . with safety and certainty.

They cost no more than ordinary inks and every plant should stock Zephyr Blacks for rush jobs. Write for descriptive folder.

Sinclair & Valentine Co.

MAIN OFFICE AND FACTORY:
603-611 West 129th Street, New York, N. Y.

BRANCH OFFICES

Albany	Chicago	Los Angeles	New Orleans
Boston	Dallas	Philadelphia	Nashville
Baltimore	Dayton	Jacksonville	Kansas City
Birmingham	Cleveland	Seattle	San Francisco
	Havana	Manila	

"PLATE-TAK"
CUT MOUNTING TAPE

No tacks. No cement to squeeze out. Simply lay a strip of this super-thin tape under the cut; press down by hand, and the cut is there to stay. When through, the tape strips off, leaving clean surfaces on both cut and base.

Free samples on request

EASTERN NEWSPAPER SUPPLY
9603 Northern Blvd. Corona, N. Y.

Offset Or Letter Press
GET YOUR COPY OF THIS BOOK TODAY.
NO COST—NO OBLIGATION
American Made by
WEBENDORFER-WILLS CO., INC.
Builders of Printing Machinery for over Thirty Years
MOUNT VERNON, NEW YORK, U. S. A.

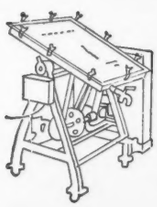
FOR SALE: Goss 48 page straight line Sextuple Press 23 9/16 inch page cut off equipment with two folders and electric paper hoist. Semi-automatic A. C. Control. Two ton Hoe metal pot with pump. Hoe hand casting box and Hoe finishing machine. Priced for quick sale at $5,000 as is at Observer-Dispatch, Utica, New York, where it is now in use. Come, see it in operation.

SAFETY·RELIABILITY·ECONOMY
CLINE
PRESS DRIVES
and
CONTROL
Reels, Tensions
and Pasters . . .
CLINE SYSTEM
CLINE ELEC. MFG. CO.
Chicago: 211 West Wacker Drive
New York: 220 East 42nd Street
San Francisco: 1st Nat'l Bank Bldg.

STEEL POURING SHEETS
• For Junior and Automatic Autoplate Machines and Tubular Casting Boxes.
"Everything for the Stereotype Department"
UNITED STEREOTYPE SUPPLY CORP. •
14 CAMBRIA ST. BOSTON, MASS.

SEND YOUR TRIAL ORDER TODAY
MASTERPIECE CREEPER
REGULAR GAUGE .062"—TUBULAR GAUGE .090"
COYNE & PADDOCK, INC.
48-15 32nd PLACE LONG ISLAND CITY, N. Y.

GENERAL REPAIR OF LINOTYPE AND INTERTYPE MOLDS (ANY KIND, ANY SIZE). PARTS, ETC., SINCE 1912
Makers of Reid Magazine Racks, Etc.
WILLIAM REID & CO., 2271 Clybourn Ave., Chicago, Ill.



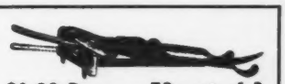
KLEAN-O-MAT PROCESS
• The only method of cleaning magazines and mats mechanically—without running out the mats. Adopted by the leading printing plants and approved by Linotype Company and Intertype Corp. Improves production—Actually pays for itself.
KLEAN-O-MAT CORPORATION
30 Rockefeller Plaza New York, U. S. A.

FOR DEPENDABLE MAKEREADY PROTECTION
Buy and Specify
CROMWELL
SPECIAL Tympan PREPARED Paper
QUALITY BUILT IN
THE CROMWELL PAPER CO.
4801-29 S. WHIPPLE STREET CHICAGO, ILL.

Type & Press of Illinois •
A Reliable Source of Supply
220 South Jefferson Chicago

TINGUE
PRESS BLANKETS
Keep Your Presses Productive! Save Make Ready Time!
TINGUE on Press Blankets guarantees Superior Printing Qualities
TINGUE PRINTING PRESS BLANKETS
are guaranteed to give superior printing
. . . at low production costs . . .
TINGUE, BROWN & CO.
118-120 East 25th St. NEW YORK, N. Y.
1227 Wabash Ave. CHICAGO ILL.
723 East Washington Blvd LOS ANGELES CAL.

DUPLEX PRESSES
Semi-Cylindrical • Unitubular
Tubular • High Speed Flat Bed
Flat Bed • Stereo Machinery
The Duplex Printing Press Co.
Battle Creek, Mich.

SPRING TONGUE GAUGE PINS

Reg. U. S. Pat. Office $1.80 Doz. 50c set of 3
Made Only by Originator. All Dealers.
We Make Gauge Pins, Gauges, Gripper Fingers, Etc.
The E. L. Megill Co., 763 Atlantic Ave., Brooklyn, N. Y.

placing the different size lamps at the focus of the reflector. The synchronizer may be adjusted to conform with the time lag characteristics of different makes, sizes and types of flash lamps.

Explosion of flash lamps was stated to be a problem. It was suggested that the bulb be covered with a cellophane bag to confine flying glass in case of an explosion.

Existing synchronizing equipment was discussed critically, it being said that it is too light and too easily damaged to stand up under press conditions.

Requirements of Photographs for Newspaper Reproduction

At this Monday morning clinic, Head Photographer Wells Crandall of the Elmira *Star-Gazette*, presided as chairman. He was assisted by Art Editor Robert Reeves of the Rochester *Democrat and Chronicle*.

Photo-engraving Foreman W. W. Spaulding of the Albany *Knickerbocker News*, presented an outline of a good newspaper picture. His requirements for a good newspaper photograph are: (1) Sharpness, (2) Definition of tone, (3) Eliminate as much as possible too much black in the picture.

Chairman Wells Crandall observed: "We should look for three things in our prints: Somewhere in the photograph there should be a pure white, a pure black and three middletones."

Mr. Spaulding agreed with another speaker who stated that engravers want a brilliant print with clean but not chalky whites, clean but not sooty blacks. Generally speaking, the same type of print for reproduction that the photographer would put on a copy board to photograph. If detail is not in the photograph, the engraver cannot put it there. Flesh tone may be obtained by burning it in.

In the general discussion it was brought out that it is possible to obtain a brilliant print out of an over-exposed negative (over-exposed a full stop) by cutting developing time about one-third.

Assistant Chairman Robert Reeves observed that one of the few ways of avoiding or eliminating the necessity for retouching is to guard at all times against backgrounds that give colors which run into clothes, head or hair.

Color Photography in the Newspaper

After Chairman C. B. Neblette, assisted by C. M. Mattern of the Eastman Kodak Company's engraving department, opened the clinic, he showed and explained the equipment designed at the Institute for its own use.

A discussion ensued regarding the various methods of color photography. These are as follows: Screen-plate process, Agfa color process, Finlay process, Lumiere Orthochromatic. We have two other methods of making color photographs: (1) One-shot camera and (2) Process of integral tri-pac, such as the Kodachrome. The present major difficulty in the use of Kodachrome for certain kinds of press work is the delay which must occur between the making of the original photograph and the time the positive is received.

Assistant Chairman Mattern asserted that color photography should be of interest to everybody in press photography because of the good black and white reproductions that can be made from Kodachrome.

In answer to the question: "Can a better result be obtained in making three-color separation negatives direct from Dufay than three-color prints?" The answer was: With Kodachrome it would be better to make the negative direct from the transparency.

Darkroom Procedures and Administration

The first part of the Darkroom Procedures and Administration Clinic, announced Chairman Wells Crandall of the Elmira *Star-Gazette*, would be devoted to a general discussion of technical questions, after which the latest photographic equipment would be demonstrated.

It was brought out that city desks usually complain about grain in the picture but the photo-engraver does not. On one hand, grain is a problem from the newspaper man's standpoint in the enlargement of certain pictures, but on the other hand, there is no evidence that grain tangles with the screen to produce patterns. It is desirable, however, to eliminate grain wherever possible.

Developers were then discussed, especially press solutions for developing newspaper negatives in a hurry. One two-solution developer results in three things: (1) Solutions are stable and oxidize less rapidly, (2) Exhausted less rapidly, larger amount of sensitive material may be developed, and (3) The degree of development is approximately the same, the contrast obtainable is approximately the same. Two possible drawbacks are that for a given material it is possible to change contrast of negative only by modifying the developer. We do not have the control of contrast in the single developer. With the divided developer, highlights tend to flatten out. The special Crabtree and Russell formula is recommended for high-speed press work. This developer contains formalin.

From the standpoint of economy, efficiency and convenience someone asked whether it is desirable to buy ready-mixed chemicals or to buy them separately in bulk. The clinic was about evenly divided on the question.

Advertisers' Index

	Page
American Publishers Supply	49-51
American Type Founders *Agency:* G. M. Basford, New York, N. Y.	31
Atlantic Zinc Works	41
Bijur Lubricating Corporation *Agency:* G. E. Hatch, Advertising, New York, N. Y.	46
Bingham's, Sam'l, Son Manufacturing Company	11
Booth, E. A., Rubber Company	41
Burgess Cellulose Company *Agency:* Almon Brooks Wilder, Advertising, Chicago, Ill.	43
Certified Dry Mat Corporation *Agency:* The H. P. Boynton Advertising Agency, Cleveland, O.	37
Challenge Machinery Company, The *Agency:* Simmonds & Simmonds, Inc., Chicago, Ill.	39
Cline Electric Manufacturing Company *Agency:* L. W. Ramsey Co., Chicago, Ill.	53
Cottrell, C. B., & Sons Company *Agency:* Fred Glen Small, New York, N. Y.	19
Coyne & Paddock, Inc.	53
Cromwell Paper Company, The *Agency:* Roche, Williams & Cunnyngham, Inc., Chicago, Ill.	53
Cushman Electric Company	36
Dayton Rubber Manufacturing Company, The *Agency:* Geyer, Cornell & Newell, Inc., Dayton, O.	29
Duplex Printing Press Company, The	53
Eastern Newspaper Supply	48-52
Flint, Howard, Ink Company	9
General Electric Company	33
General Electric Vapor Lamp Company *Agency:* G. M. Basford Co., New York, N. Y.	23
Goss Printing Press Company, The *Agency:* Simmonds & Simmonds, Inc., Chicago, Ill.	10
Hammond Machinery Builders, Inc.	43
Harris-Seybold-Potter Company *Agency:* Baker and Baker & Associates, Inc., Cleveland, O.	27
Ideal Roller & Manufacturing Company *Agency:* Arthur E. Theobold, Advertising, Chicago, Ill.	25
Imperial Type Metal Company	47
International Printing Ink Corporation	44
Intertype Corporation *Agency:* Fred Glen Small, New York, N. Y.	Outside Back Cover
Kimble Electric Company *Agency:* Kirkgasser-Drew, Inc., Chicago, Ill.	51
Klean-O-Mat Corporation	53
Lake Erie Stereotype Equipment Corporation *Agency:* Horace A. Laney, Buffalo, N. Y.	50
Linograph Corporation *Agency:* Fred Hinrichsen Advertising Agency, Davenport, Iowa.	44
Linotype Parts Company	47
Low, John M., & Company	48
Ludlow Typograph Company	5
Megill, The E. L., Company	53
Mergenthaler Linotype Company *Agency:* Kenyon & Eckhardt, Inc., New York, N. Y.	Inside Front Cover
Miehle Printing Press & Manufacturing Company *Agency:* Raymond Heer, Chicago, Ill.	21
Milwaukee Saw Trimmer Corporation	50
Monomelt Company *Agency:* Olmsted-Hewitt, Inc., Minneapolis, Minn.	45
Montgomery & Bacon	50
National Graphic Arts Expositions, Inc.	12
Observer-Dispatch	52
Reid, William, & Company	53
Riegel Paper Corporation *Agency:* William H. Hodgins, New York, N. Y.	51
Rolled Plate Metal Company	41
Rouse, H. B., & Company *Agency:* Clifton Kirkpatrick, Chicago, Ill.	49
Sinclair & Valentine Company	52
Sta-Hi Corporation	3
Timken Roller Bearing Company, The	8
Tingue, Brown & Company *Agency:* The Overhague Advertising Agency, New York, N. Y.	53
Type & Press of Illinois	53
United Stereotype Supply Corporation	53
Vandercook & Sons *Agency:* Clifton Kirkpatrick, Chicago, Ill.	Inside Back Cover
Vulcan Proofing Company *Agency:* Fred Glen Small, New York, N. Y.	42
Webendorfer-Wills Company, Inc.	52
Wetter Numbering Machine Company *Agency:* O. S. Tyson & Co., Inc., New York, N. Y.	48
Wood Flong Corporation *Agency:* Bela St. George, New York, N. Y.	39
Wood Newspaper Machinery Corporation *Agency:* Fred Glen Small, New York, N. Y.	6

25 IMPRESSIONS A MINUTE!

No. 317 Vandercook Power Proof Press prints 25 proofs a minute---the equal of the finest production press quality.

Book and magazine pages, or any forms up to 16"x24½" requiring a number of fine proofs, can be proved most economically on the No. 317 Vandercook Power Proof Press.

Form changes may be made quickly. Facilities for easy makeready and speedy register insure maximum production in minimum time.

Many short runs of fine printing may be printed profitably on the No. 317 Vandercook Power Proof Press.

Complete details of operation and performance will be sent at your request. Write for them TODAY.

VANDERCOOK & SONS

Main Office and Factory
908 North Kilpatrick Avenue, Chicago, Illinois

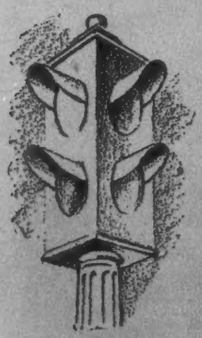
Eastern Branch
220 East 45th Street, New York City

Canada: SEARS LIMITED. Montreal. Toronto. Winnepeg. Vancouver

THAT'S THE NEW INTERTYPE FEATURE

which speeds up magazine changes

INTERTYPE MAT-TRAFFIC LIGHT *in operation. When the traffic light is shining, as shown at left, the operator knows that there are still some matrices in his distributor; but the instant the light goes out he knows that his distributor box and bars are clear and that he can go ahead and shift magazines.*



Line composing machine workers everywhere—and their employers—are talking about the Intertype Mat-Traffic Light. For this novel Intertype feature is more than merely a great convenience for the operator: it is a real time-saver. Because it shows the operator, at a glance, whether or not all the matrices he has been using have cleared his distributor box and bars, the Mat-Traffic Light eliminates needless waiting and thus accelerates magazine changes. It makes Intertype's 5-Second Shift more efficient than ever; and it banishes a common cause of wrong fonts and damage to magazines or matrices. Write to Intertype Corporation, 360 Furman Street, Brooklyn, or the nearest branch, for more information about this exclusive Intertype feature, which is now standard equipment on all Streamlined Intertypes

Step Ahead with INTERTYPE

PARISIAN WITH BODONI FAMILY